KFH GROUP, INC.

The Tri-Cities Area 2010 Transit Development Plan

Final Report

October, 2010

Prepared for:

The Crater Planning District Commission

4920 Elm Street, Suite 350 ◆Bethesda, MD 20814 ◆(301) 951-8660 ◆ FAX (301) 951-0026

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Chapter 1

Overview of Transit in the Tri-Cities

The Tri-Cities Area Metropolitan Planning Organization (MPO) provides multi-modal transportation planning services for the Cities of Colonial Heights, Hopewell, and Petersburg, and portions of the Counties of Chesterfield, Dinwiddie, and Prince George. The MPO area is located in southeastern Virginia and was included in the Richmond Urbanized Area after the 2000 Census. The MPO area encompasses 308 square miles and has an estimated population (2007/2008) of 80,960.[1] Table 1-1 provides the basic demographic and geography data for each of the MPO-member jurisdictions. Figure 1-1 provides a base map of the MPO area, which is the study area for the 2010 *Tri-Cities Area Transit Development Plan Update.*

Table 1-1: Tri-Cities MPO: Basic Demographics and Geography

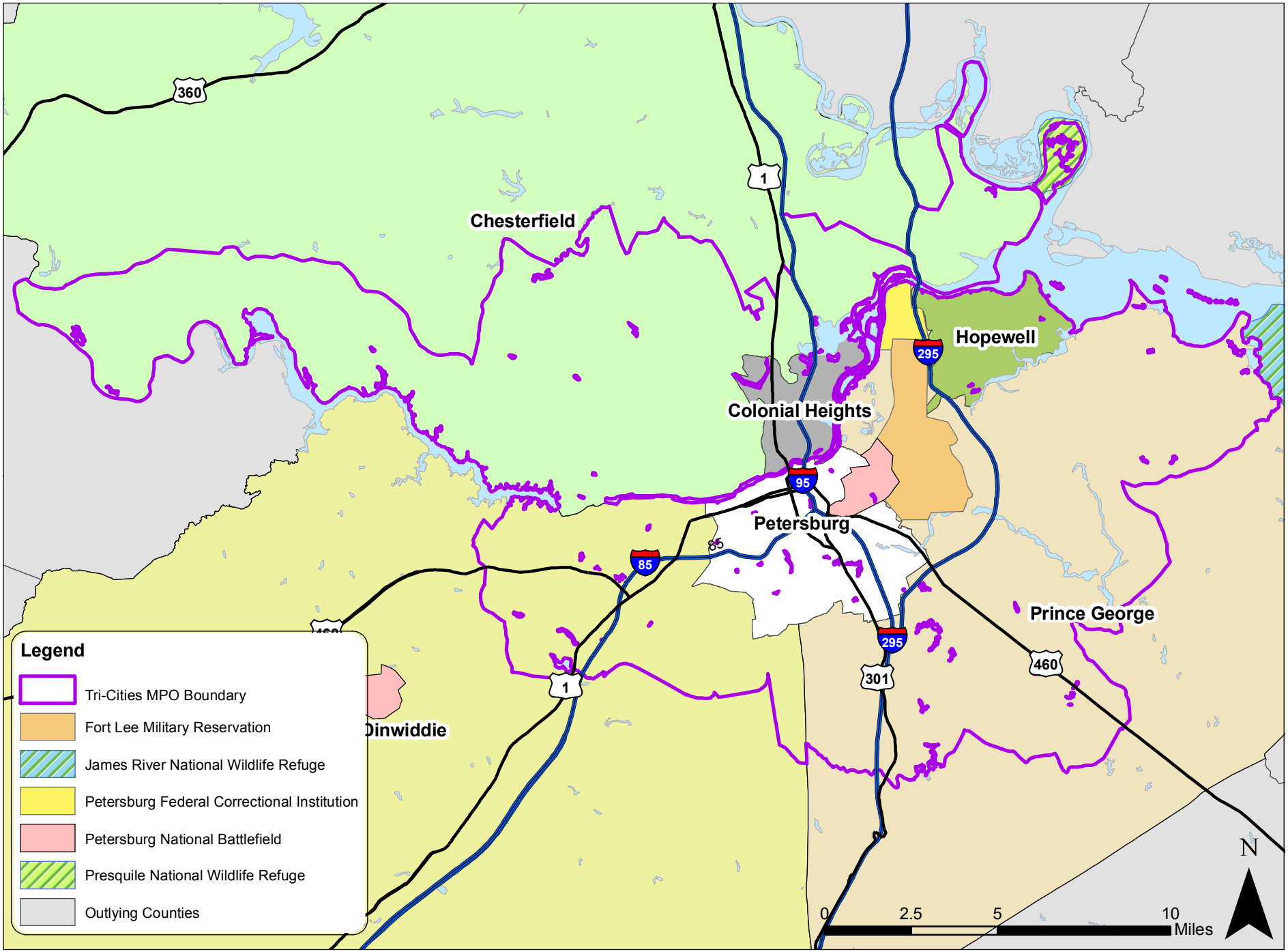
Jurisdiction	Estimated 2007/2008 Population	Square Miles	Population Density (ppl/sq.mi.)
City of Colonial Heights (1)	17,693	8.1	2,184
City of Hopewell (1)	23,263	11	2,115
City of Petersburg (1)	30,489	22	1,386
Chesterfield County (portion) (2,3)	57,469	117.4	490
Dinwiddie County (portion) (2,3)	16,615	39.2	424
Prince George County (portion) (2,3)	35,431	110.3	321
Total MPO Area	180,960	308	588

Sources:

(1) Weldon-Cooper Center
(2) ESRI 2007 Data
(3) Tri-Cities MPO

[1] Weldon-Cooper Center; ESRI Data CD (2007)

Figure 1-1: Base Map of Tri-Cities MPO Area



Public transportation in the MPO area is primarily provided by Petersburg Area Transit (PAT), which is operated by the City of Petersburg. PAT offers ten fixed routes and Americans with Disabilities Act (ADA) complementary paratransit. There is also a public transit route operated by the Greater Richmond Transit Company (GRTC) that provides service between Petersburg and Richmond, and a route operated by the Blackstone Area Bus System (BABS) that provides service from Blackstone to Petersburg. Chesterfield County also operates "Access Chesterfield," a demand-response transportation service for Chesterfield County residents who are disabled, aged 60 or older, or who meet federal income guidelines. Limited senior transportation programs are offered by the Cities of Colonial Heights and Hopewell. Petersburg is served by intercity bus service (Carolina Trailways/Greyhound) and there is an Amtrak station located in Ettrick.

HISTORY

Public transportation of some variety has been operating in the Tri-Cities region since 1882, beginning with horse-drawn street railways, then electric trolleys, and then buses. Private bus operators provided public transportation from 1927 until 1977.

The City of Petersburg began operating public transportation service in 1977, taking over from Tri-City Coaches, a private transportation provider that could no longer afford to operate the service. At the time the City took over the service, other institutional options were also considered, including a transportation district. In 1977 nine routes were operated, providing services in the Cities of Petersburg, Colonial Heights, Hopewell, and parts of Chesterfield and Prince George Counties, including Fort Lee.

The 1977 "Short Range Transit Development Plan" recommended that the existing bus services, including the regional services, be continued under contractual agreements with the City. The 1977 Transit Development Plan also recommended service expansions to Central State Hospital, northern Dinwiddie County, and later to the City of Hopewell.

Public transit ridership declined considerably in the early 1970's to 712,351 passenger trips in 1975. The decline in ridership was due to a number of reasons, including reductions in Fort Lee following the Vietnam buildup, an increase in personal income and auto ownership, continued suburbanization and the associated decline of the central business district, and the decreased level of service provided by the transit system.

By the 1993 Transit Development Plan, ridership had risen and began to decline again, with 960,354 passenger trips reported in 1992 (down from over one million in 1991). At the time of the 1993 Plan, public transit services in the region were provided only in the City of Petersburg and the Ettrick area of Chesterfield County. The fixed-route network consisted of eight routes, seven of which operated on 30-minute headways. PAT operated within a compact service area with highly productive routes, averaging 38 passenger trips per revenue hour on the fixed routes.

The 1993 TDP recommended a Regional Authority, and also recommended regional services to Hopewell, Southpark Mall, Fort Lee, Colonial Heights, as well as vanpool services to outlying employers. These regional routes were not implemented at that time.

By the 1999 TDP, ridership had fallen to 630,977 passenger trips per year (1998) and productivity had also dropped to 21 passenger trips per hour. The need for regional services was also discussed during the 1999 planning process. One of the other recommendations from the 1999 plan that has recently come to fruition is a downtown transit center for the City of Petersburg.

Since that time some regional services have been implemented, so that four of the ten PAT routes currently travel outside the City. These routes are:

- Ettrick
- Southpark Mall
- Blandford/Hopewell/Fort Lee, and
- Washington/Central State Hospital

Ridership also began a downward trend from the late 1990's to a low point in 2004. Transit ridership has begun to increase again in each of the years since 2004, with 615,478 passenger trips provided in FY 2009.

Given the long history of recognizing the need to provide regional services, one of the original goals of this TDP was to grapple with the organizational structure and governance needed to support regional services and develop a methodology for cost allocation and service that is fair and sustainable for the Tri-Cities MPO region; however, with the serious economic constraints that each jurisdiction currently faces, it was not possible to meet this goal. This issue of financial equity is of particular interest to the City of Petersburg, as it was re-classified for Federal Transit Administration (FTA) funding purposes after the 2000 Census when the Tri-Cities MPO area was merged into the Richmond Urbanized Area. The change in FTA funding category meant that PAT is now restricted in the use of its FTA Section 5307 funds. Prior to the change,

PAT could use these funds for either operating (up to 50% of the net deficit) or capital (up to 80% of the net deficit). PAT is now restricted to using these funds for capital purposes only.[2]

This funding change has meant that the City is spending more of its general fund revenue to subsidize PAT, rather than using the Federal S.5307 funds. The City is also paying a subsidy to GRTC for the Petersburg-Richmond route, and the new multi-modal center will result in increased operating costs for the City. It is in this context that the need for a regional structure is particularly important at this time.

GOVERNANCE AND ORGANIZATIONAL STRUCTURE

PAT is operated as a City Division under the Department of Public Works. The Director of Public Works reports to the City Manager, who reports to the Mayor and City Council of the City of Petersburg. The Assistant Director of Public Works (currently vacant) has been historically tasked with the position of Transit Manager. These duties are currently being split among the Director of Public Works, the Transit Operations Manager, and the Transit Administrative Manager. Figure 1-2 provides the organizational chart for PAT.

TRANSIT SERVICES PROVIDED AND AREAS SERVED

The City of Petersburg directly operates PAT. Ten fixed routes serve the Petersburg Area, as well as complementary ADA paratransit services. Eight vehicles are used to operate the ten routes. The routes are operated on a timed hub transfer system, whereby the routes come together in downtown Petersburg for transfer opportunities. The timed transfer location has recently been consolidated to the new Petersburg Station.

The City also helps support a route operated by GRTC that provides service between Petersburg and Richmond. For FY 2010 Petersburg contributed $150,000 for this route. Five northbound morning trips are offered, one mid-day trip is offered, and five southbound late afternoon trips are offered. The Blackstone Area Bus System (BABS) operates the Dinwiddie Express, which offers one trip into Petersburg from Dinwiddie County in the morning, and two trips from Petersburg to Dinwiddie County in the afternoon. Petersburg does not contribute financially to the Dinwiddie County

[2] There are three operational expense categories that can be "capitalized" under FTA regulations and funded with S.5307 funds. These are preventive maintenance expenses, planning expenses, and ADA paratransit (up to 10% of the total FTA S.5307 allocation).

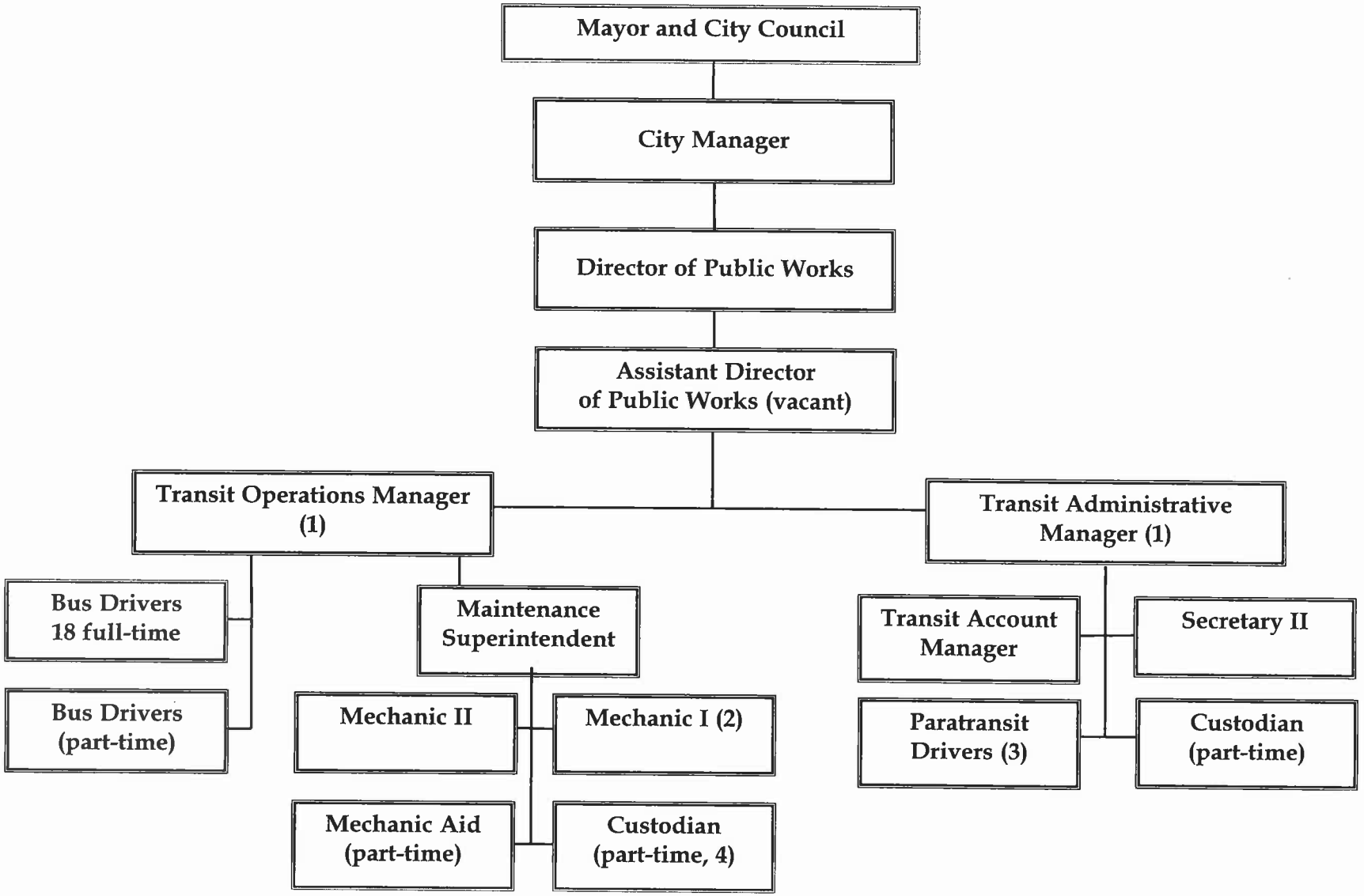


Figure 1-2-: PETERSBURG AREA TRANSIT ORGANIZATIONAL CHART

service. Figure 1-3 shows the existing PAT, GRTC, and BABS services in the Tri-Cities MPO region.

Directly Operated Fixed-Route Service

PAT service generally operates Monday-Friday from 6:15 a.m. to 7:15 p.m., with service ending one hour later (8:15 p.m.) on Fridays. Saturday service is generally offered from 7:15 a.m. to 8:15 p.m. Some of the routes are operated on 30-minute headways and some are operated on hourly headways. The specifics for each route are described below.

Chapter 3 of this TDP provides a more in-depth service and system evaluation.

Washington Street/Central State

The Washington Street/Central State route provides east-west transit service through Petersburg's downtown, originating at the Transportation Center, traveling around a downtown block, then heading west on Washington Street to travel through the Kennelworth and Pembroke neighborhoods. The route returns downtown via Rome and Wythe Streets. On three of the morning runs (6:15 a.m., 7:15 a.m., and 8:15 a.m.) and two of the afternoon runs (1:15 p.m., and either 5:15 p.m. M-Th, or 6:15 p.m. Fr.) the route extends to serve Central State Hospital. The Washington Street and Central State routes were previously operated separately, but recent budget constraints have resulted in the combination of these two routes. Service is provided Monday-Friday from 6:00 a.m. to 6:45 p.m., with service ending at 7:45 p.m. on Fridays. Saturday service operates from 7:15 a.m. to 7:45 p.m. (no service to Central State on Saturdays). Thirty-minute headways are offered when the route does not serve Central State (9:15 a.m.-1:15 p.m.; and 2:15-5:15 p.m.) and hourly service is provided when the route does serve Central State. Figure 1-4 provides a map of this route. In FY 2009, this route provided 106,927 annual passenger trips (combined Washington Street and Central State). This route is the highest ridership route in the PAT network.

Halifax Street

The Halifax Street route provides service from downtown to Patterson St./Augusta Avenue via Halifax Road. Service is provided Monday-Friday from 6:25 a.m. to 6:50 p.m., with service ending at 7:50 p.m. on Fridays. Saturday service operates from 8:15 a.m. to 7:50 p.m. Hourly service is operated on this route, which is interlined with Route 5, Plaza. Figure 1-5 provides a map of this route. In FY 2009 there were 92,007 passenger trips taken on the combination of the Halifax and Plaza routes.

Figure 1-3: Existing Transit Services in Tri-Cities MPO

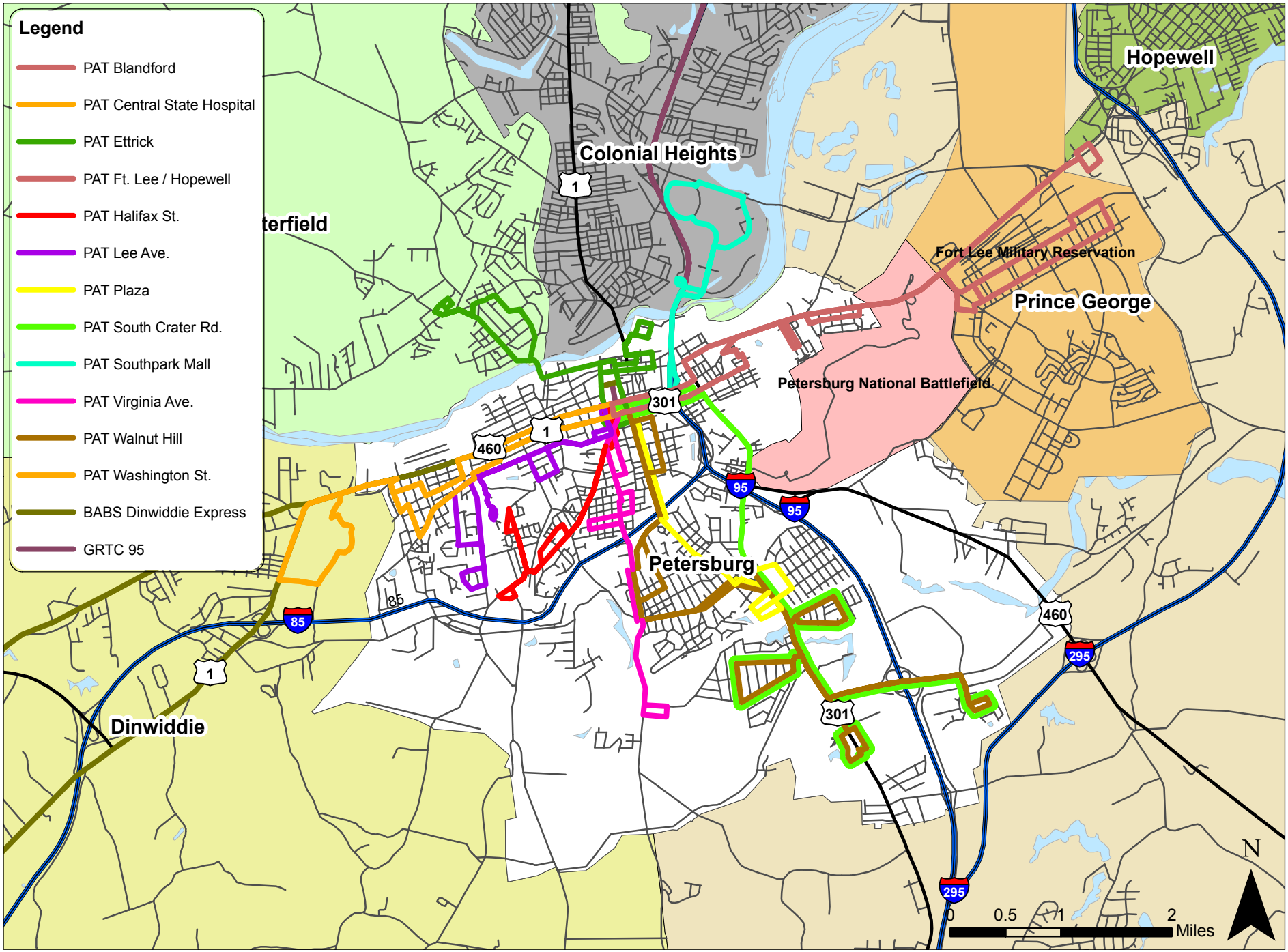


Figure 1-4: PAT Washington Street/Central State Hospital

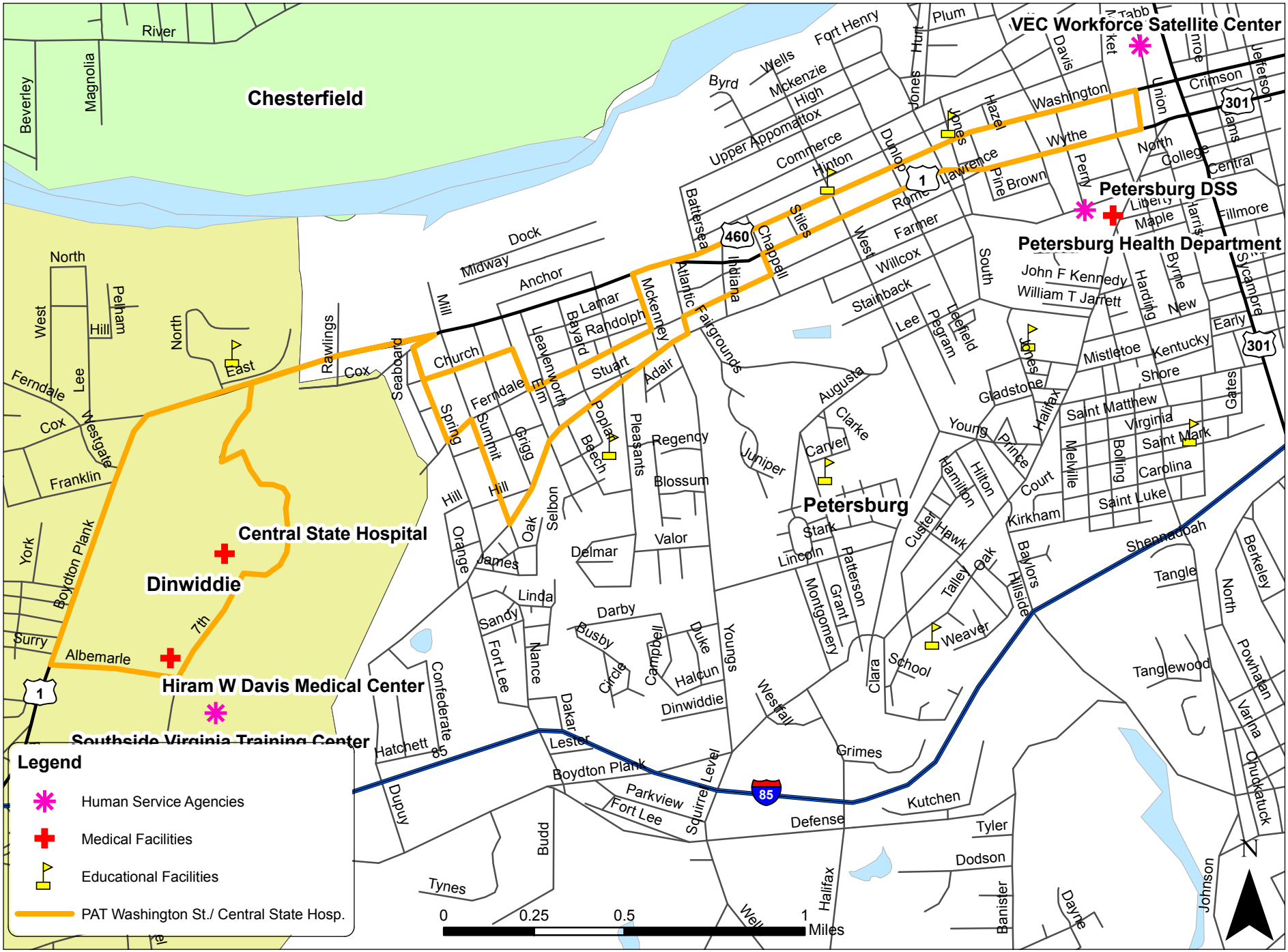
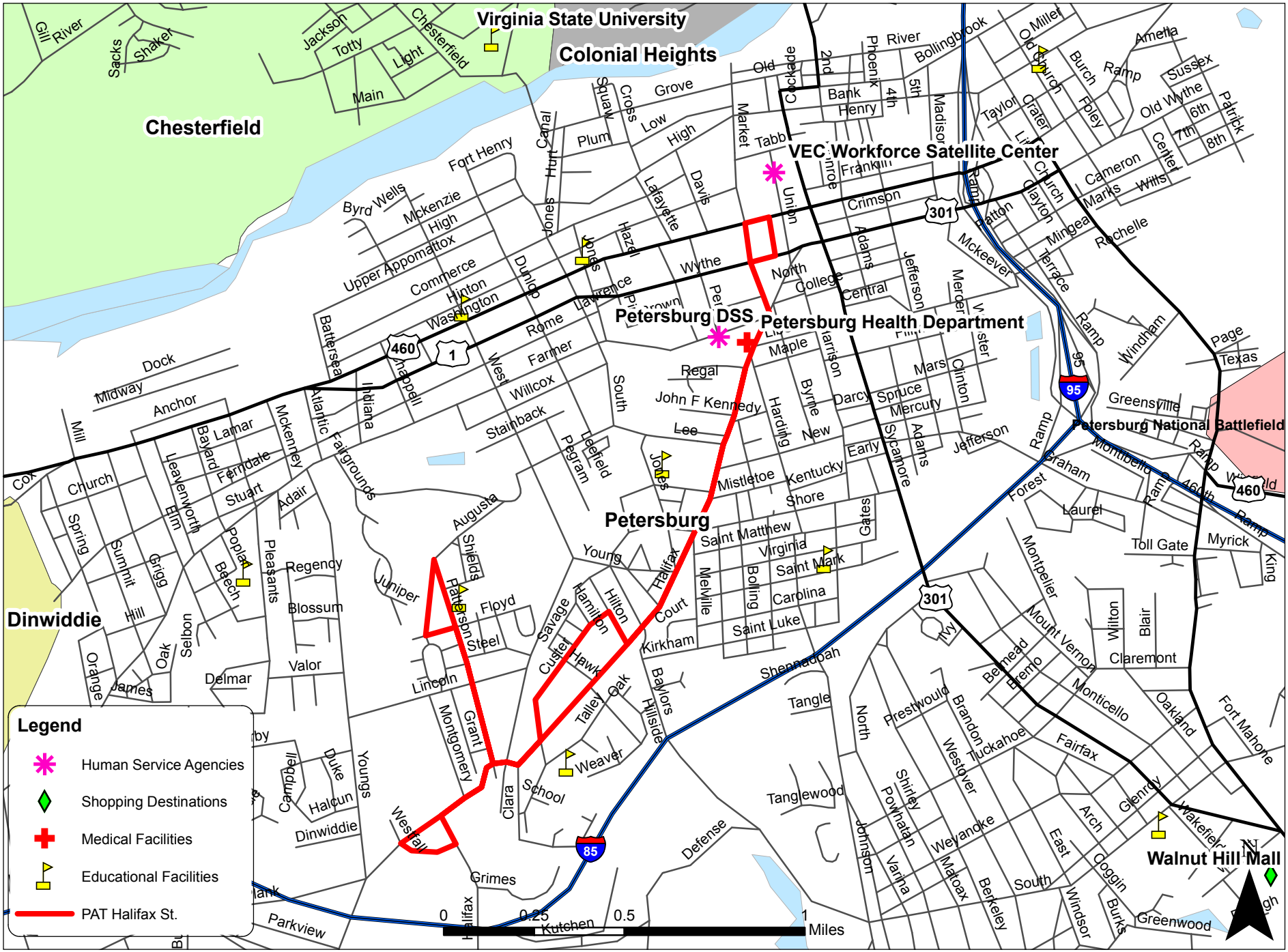


Figure 1-5: PAT Halifax Street



Lee Avenue

The Lee Avenue route provides service through a downtown loop starting at the Transportation Center, and then heads west on Farmer Road, serving Pecan Acres and Western Hills on alternating runs. Service is provided Monday-Friday from 6:15 a.m. to 6:45 p.m., with service until 7:30 p.m. on Fridays. Saturday service is provided from 7:15 a.m. to 7:30 p.m. Thirty-minute headways are provided. Figure 1-6 provides a map of this route. There were 60,704 passenger trips provided on this route in FY 2009.

Virginia Avenue

The Virginia Avenue route provides north-south service from downtown to Petersburg High School via Halifax, Harding, High, Pearl, and Johnson Roads. Service is provided Monday through Friday from 5:55 a.m. to 6:15 p.m., with service until 7:45 p.m. on Fridays. Saturday service is provided from 7:45 a.m. to 7:45 p.m. Hourly service is offered on this route, which is interlined with the Ettrick Route. Figure 1-7 provides a map of this route. In FY 2009 there were 59,857 annual passenger trips provided on the Virginia Avenue and Ettrick Routes combined.

Plaza

The Plaza route originates downtown, travels around the block, and then travels south on Sycamore Street to the Walnut Hill Plaza shopping area. Service is provided Monday through Friday from 6:45 a.m. to 6:45 p.m., with service until 7:40 p.m. on Fridays. Saturday service is offered from 7:45 a.m. to 7:40 p.m. The Plaza route operates on hourly headways and is interlined with the Halifax Street route. Figure 1-8 provides a map of this route. Ridership for this route is included with the Halifax Street route.

Ettrick

The Ettrick route provides service from downtown to Virginia State University and Ettrick in Chesterfield County, including the Amtrak Station. The Pocahontas neighborhood on Pocahontas Island is also served three times per day on this route. Service is offered Monday-Friday from 6:15 a.m. to 6:45 p.m., with service extended until 7:45 p.m. on Fridays. Saturday service is provided from 7:15 a.m. to 7:45 p.m. The Ettrick route offers hourly service and is interlined with Route 4, Virginia Avenue. Figure 1-9 provides a map of the Ettrick route. Ridership for this route is included with the Virginia Avenue route.

Figure 1-6: PAT Lee Avenue

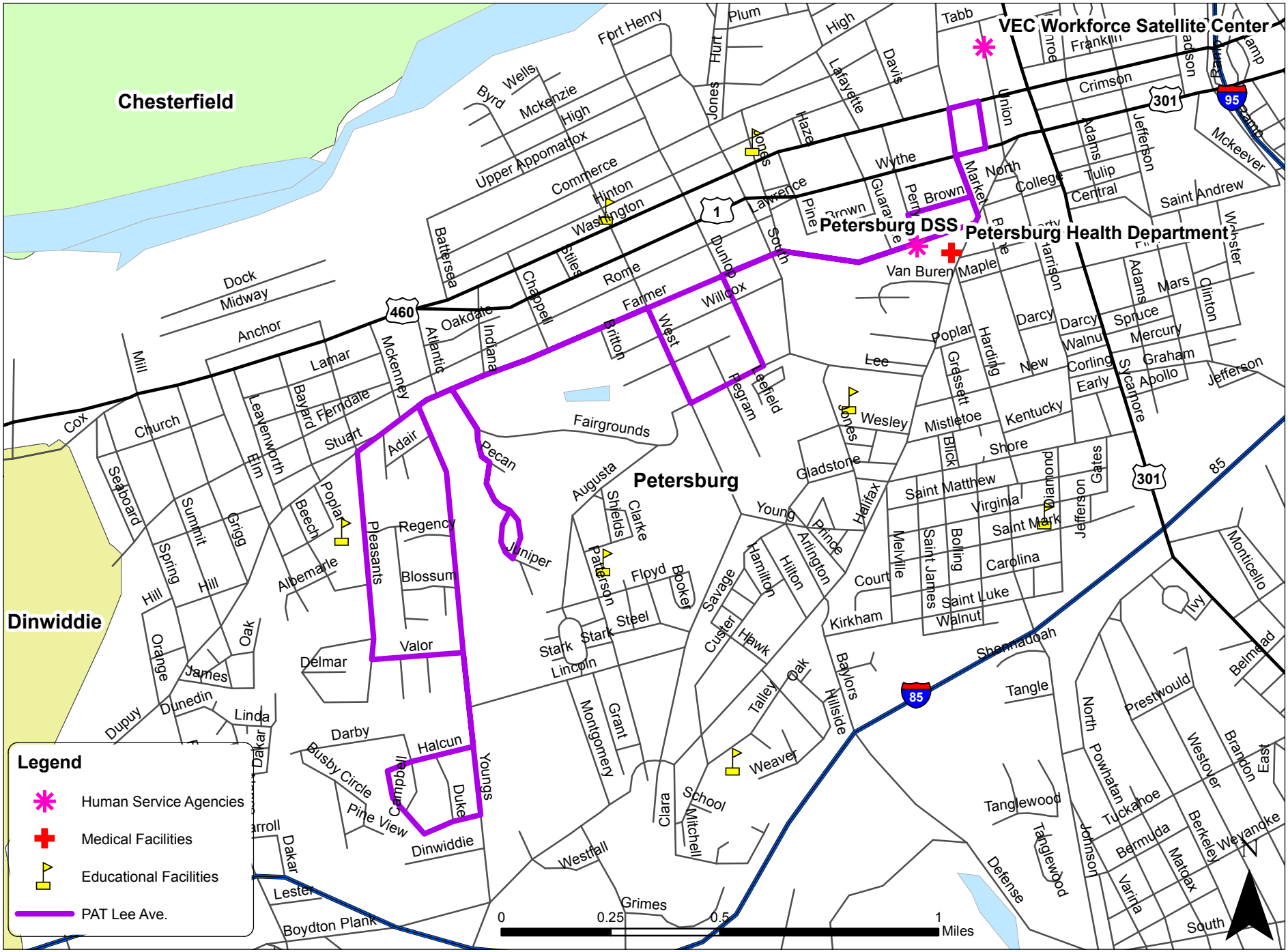


Figure 1-7: PAT Virginia Avenue

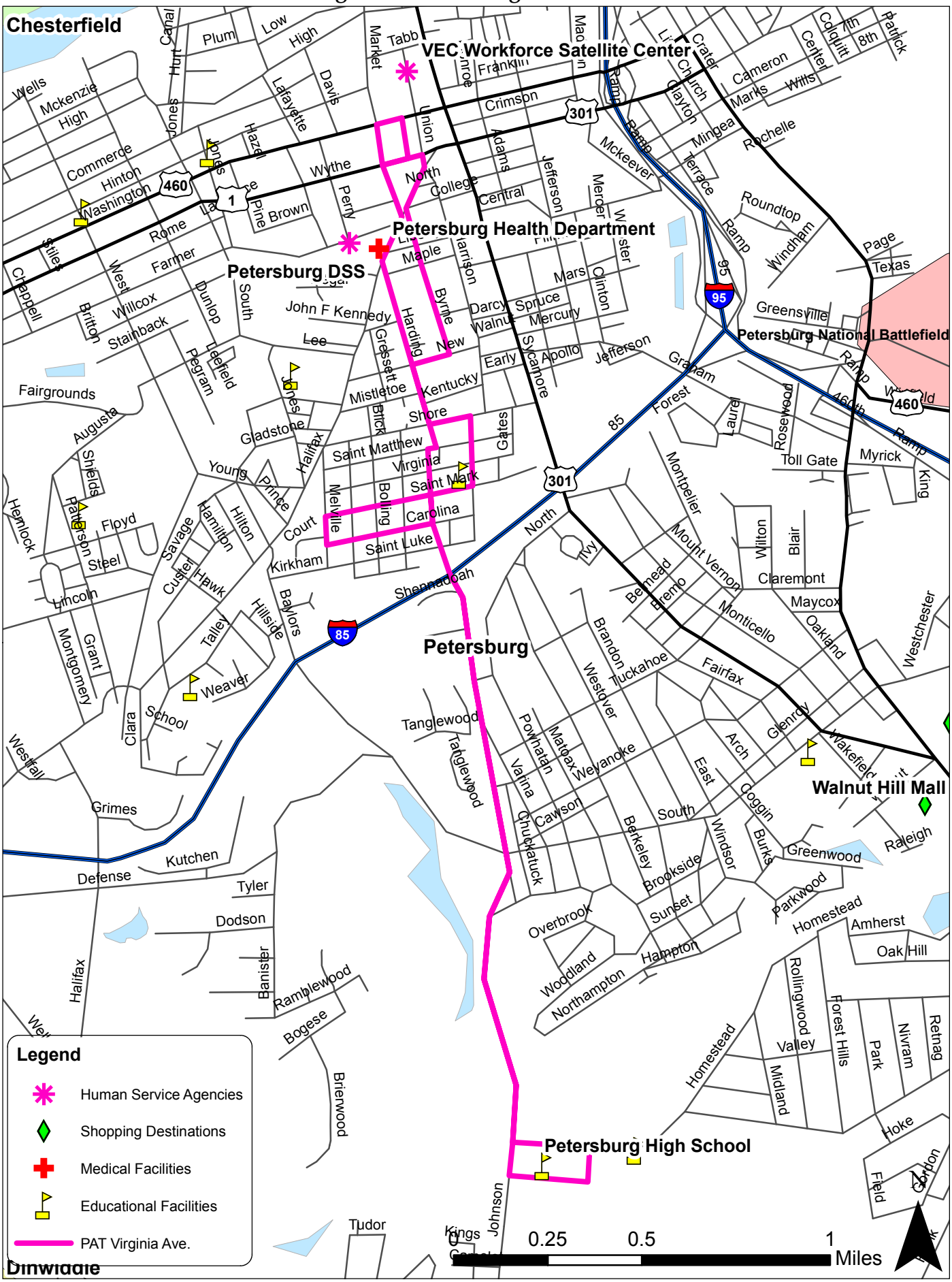


Figure 1-8: PAT Plaza

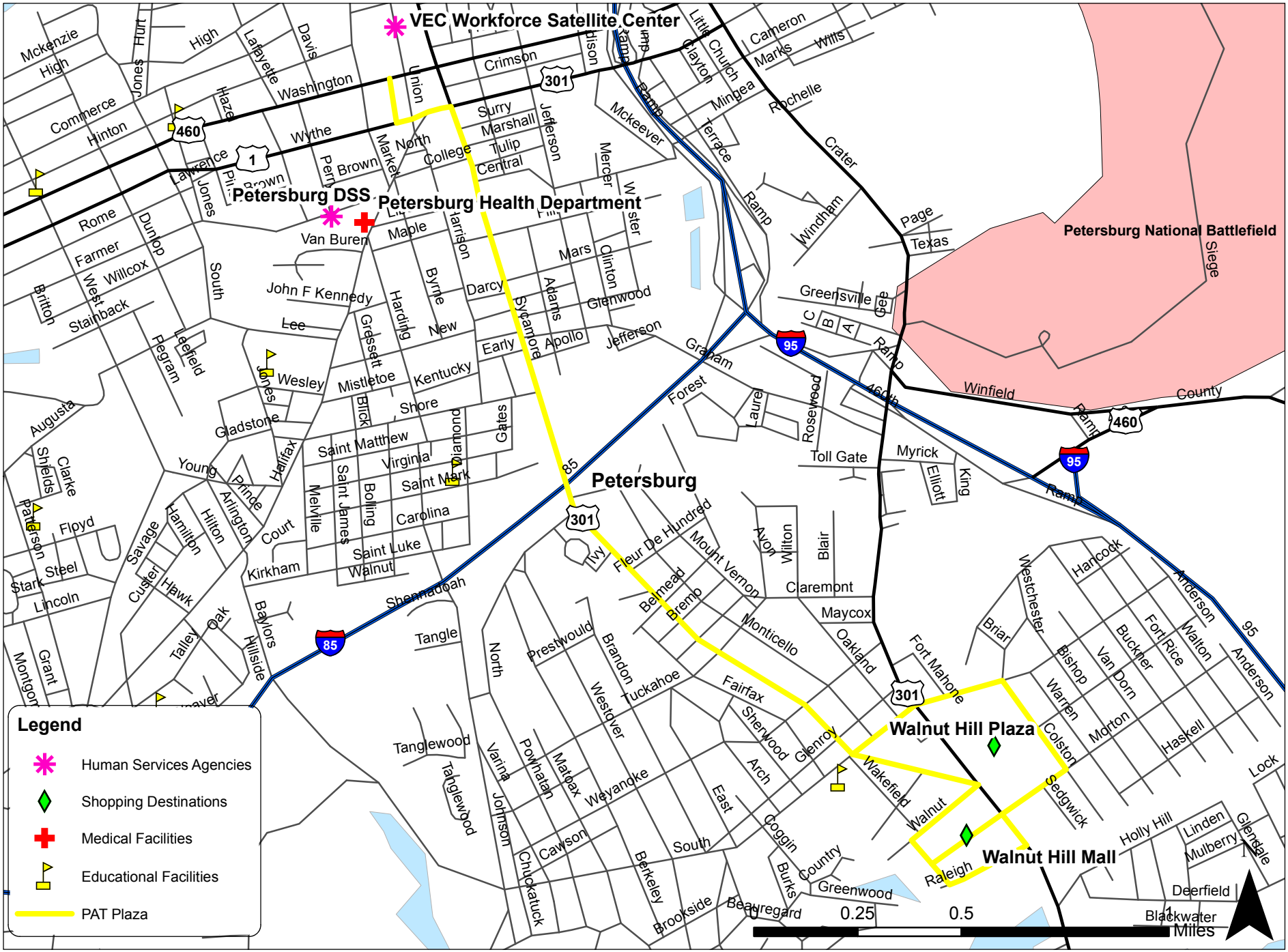
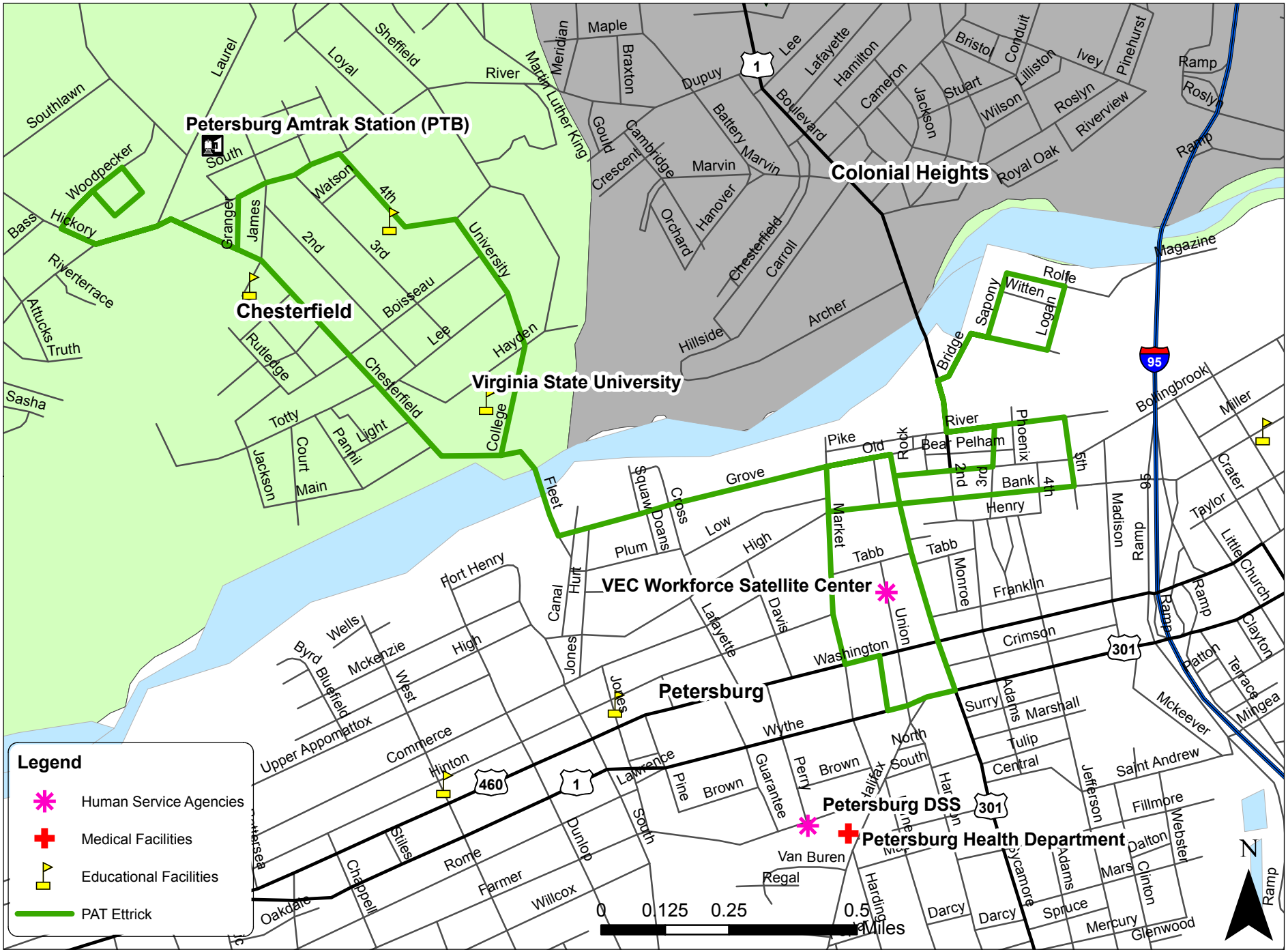


Figure 1-9: PAT Ettrick



Walnut Hill

The Walnut Hill Route provides service from downtown to several neighborhoods in the southeast portion of the City, including Walnut Hill, Oakhurst, Battlefield Park, and Overbrook Hills. Shopping areas along S. Crater Road are also served. Service is offered Monday-Friday from 5:45 a.m. to 5:45 p.m., with service extended until 6:45 p.m. on Fridays. Saturday service is offered from 7:45 a.m. to 6:45 p.m. Hourly headways are offered on the route. Figure 1-10 provides a map of the Walnut Hill route. There were 69,579 passenger trips provided on this route in FY 2009.

South Crater Road

The South Crater Road route provides north-south service along South Crater Road, with the Wal-Mart store serving as the southern terminus. Service is provided Monday-Friday from 6:15 a.m. to 6:45 p.m., with service extended to 7:45 p.m. on Fridays. Saturday service is provided from 7:15 a.m. to 7:45 p.m. Hourly service is offered on this route. Figure 1-11 provides a map of the South Crater Route. Ridership on the South Crater Road route is very similar to ridership on the Walnut Hill route, at 69,651 annual passenger trips (FY 2009).

Southpark Mall

The Southpark Mall route links downtown Petersburg with the Southpark Mall Shopping area in Colonial Heights. The route originates at the Transportation Center, makes a downtown loop, and then uses I-95 to the Southpark Mall exit. Service is provided Monday through Friday from 6:15 a.m. to 7:15 p.m., with service extended until 8:00 p.m. on Fridays. Saturday service is offered from 7:15 a.m. to 8:00 p.m. Hourly service is offered on this route. Figure 1-12 provides a map of the Southpark Mall route. In FY2009 there were 47,548 annual passenger trips provided on the route.

Blandford/Hopewell/Fort Lee

The Blandford/Hopewell/Fort Lee route travels from downtown Petersburg to Fort Lee and the Crossings Shopping area in Hopewell via Wythe Street and E. Washington Street (State Route 36). The Hopewell/Fort Lee route was recently combined with the Blandford route, adding several residential neighborhoods off of E. Washington Street to the route. Service is provided Monday through Friday from 6:15 a.m. to 7:10 p.m., with service extended until 8:10 p.m. on Fridays. Saturday service is offered from 7:15 a.m. to 8:10 p.m. Hourly service is provided on the Blandford/Fort Lee/Hopewell route. Figure 1-13 provides a map of the route. In FY 2009, the Blandford Route was separate from the Ft. Lee/ Hopewell Route, with 63,830 trips provided on the Blandford Route and 34,933 trips provided on the Ft. Lee/Hopewell Route, for a combined total of 98,763 annual passenger trips.

Figure 1-10: PAT Walnut Hill

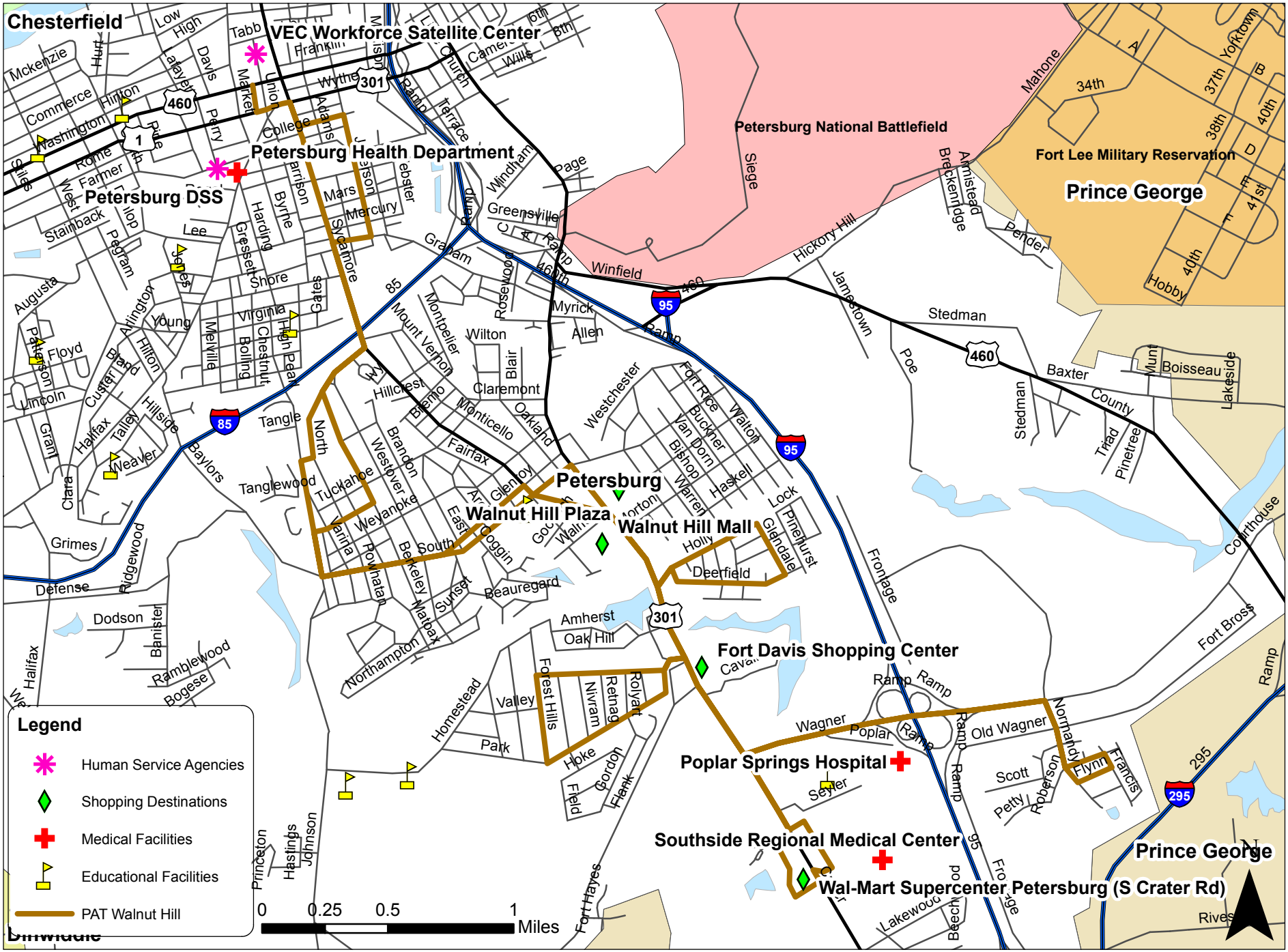


Figure 1-11: PAT South Crater

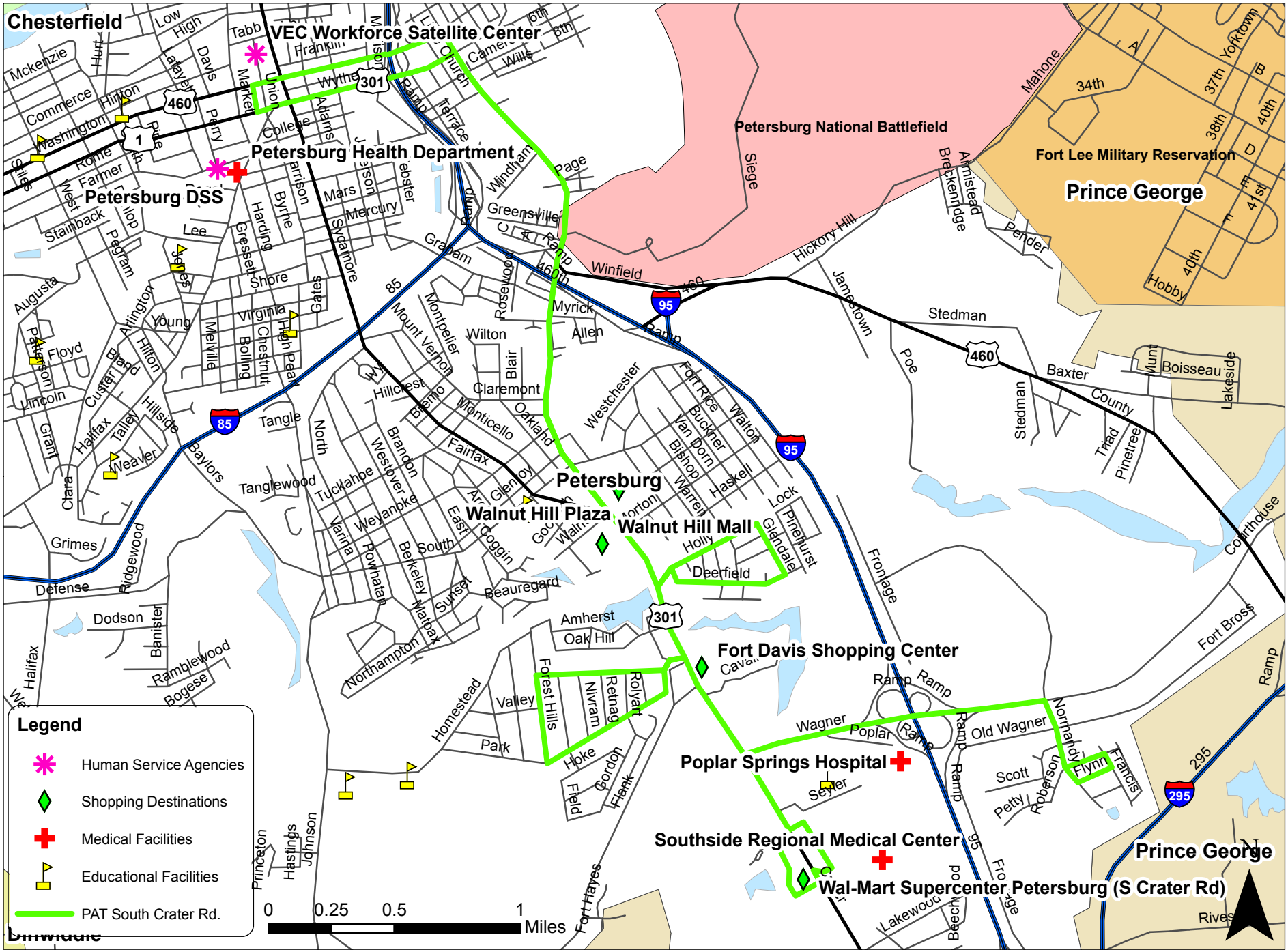


Figure 1-12: PAT Southpark Mall

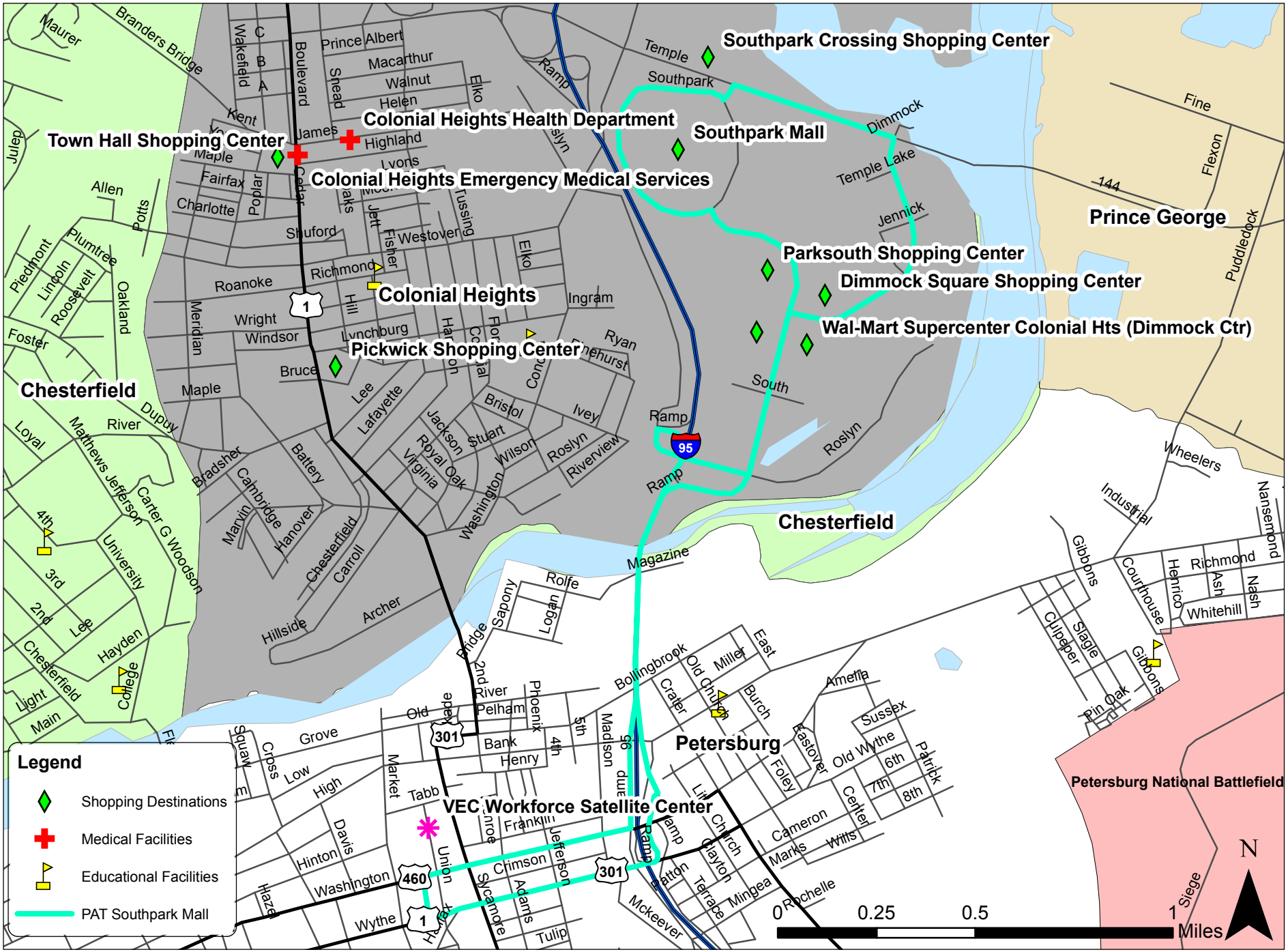
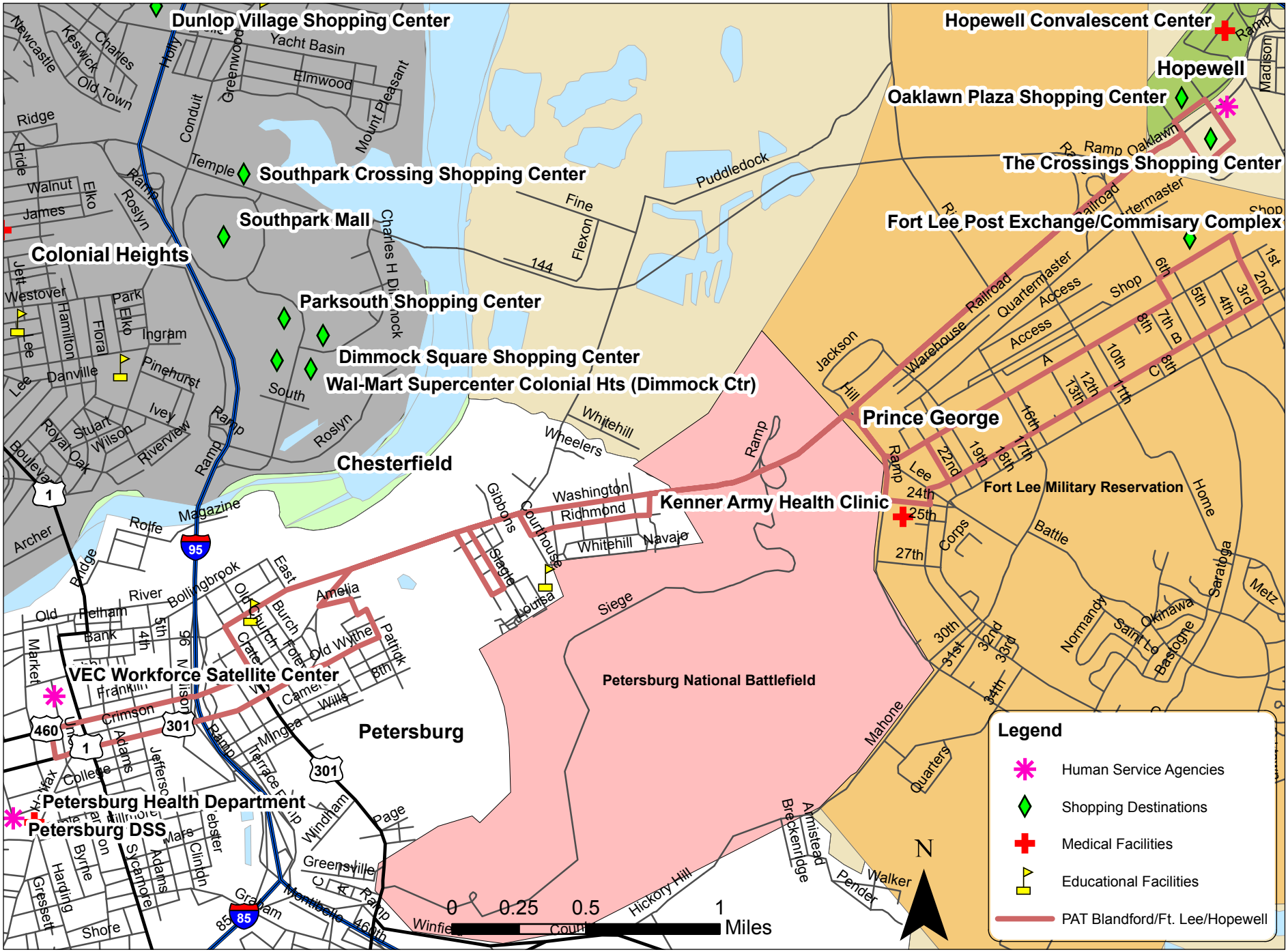


Figure 1-13: PAT Blandford/Fort Lee/Hopewell



Paratransit Service

PAT offers complementary door-to-door ADA paratransit service for senior citizens and people with disabilities who either live within the City limits or within ¾ mile of a PAT route. In addition, trips to medical facilities located within the City of Colonial Heights, Dunlop Farms and the City of Hopewell along the Route 36 corridor in the area of the Crossings Shopping Center are honored. Shopping trips are permitted in Colonial Heights along Charles Dimmock Parkway and in the Westgate Shopping Center area of Dinwiddie County. ADA paratransit service operates during the same hours as the fixed routes. Riders can schedule their trips for the next day, up to 14 days in advance. Same day service is provided if there is time in the schedule. The ADA fare is the same as the fixed-route fare at $1.00 per trip.

FARE STRUCTURE

The one-way base fare for PAT is $1.00 per trip. Senior citizens and people with disabilities pay a fare of $0.50 per trip. A discount ticket book of 10 tickets is $8.00 and a School Ticket Book of 20 tickets is also $8.00. There is a 10 cent charge to transfer from one route to another. The fare structure is highlighted in Table 1-2.

Table 1-2: PAT Fare Structure

Regular Base Fare*	$1.00
Senior Citizens/Persons with Disabilities	.50¢
Discount Book of 10 Tickets	$8.00
School Ticket Book of 20 Tickets	$8.00

* One adult may carry a child under the age of six and one infant at no additional cost.

The City's 2010 Budget Message from the City Manager suggested a fare increase of $0.25 (to $1.25 per trip) and also suggested a $1.00 transfer for people transferring from the GRTC bus. The proposed fare increase has not been implemented.

VEHICLE FLEET

PAT owns 27 vehicles, 16 of which are heavy-duty transit buses (Gilligs), six of which are paratransit vehicles, and five of which are service and supervisory vehicles.

All of the revenue service vehicles are ADA accessible. Of the 16 heavy-duty transit vehicles, eight are needed for peak service, resulting in a spare ratio of 50%, which is higher than the FTA's spare allowance of 20%. It should be noted that the fleet includes six 1997 vehicles, which are nearing the end of their useful life. When these vehicles are retired, the spare ratio will be 20%.

PAT Gillig in service on Sycamore Street

The newer vehicles are wired for security cameras, but PAT has not been able to secure funding to purchase security cameras for the vehicles. One of the Gilligs is equipped with a bicycle rack. Five of the six paratransit vans are used on a daily basis, resulting in a paratransit spare ratio of 16.6%. Table 1-3 provides the PAT vehicle inventory as of September, 2009.

FACILITIES

PAT's administrative, operating, maintenance, and vehicle storage facility is currently located at 309 Fairgrounds Road, adjacent to the West End Park Fairgrounds and the Pecan Acres neighborhood. PAT conducts maintenance and fueling in-house at this facility. The office location for the Director of Public Works is located at the City Annex Building in downtown Petersburg (103 W. Tabb Street). The PAT administrative staff recently moved to offices within the Petersburg Station, while the vehicle operations and maintenance staff remain at the Fairgrounds Road facility.

Table 1-3: PAT Vehicle Inventory
September 2009

PAT Vehicle ID #	Year	Type	VIN #	Use
Jimmy	1995	GMC	1GKDT13W5SK535764	Service Vehicle
Explorer	1996	Ford	1FMDU34X1TUA57427	Service Vehicle
Service Truck	1997	GMC	1GDJ7H1J1VJ501806	Service Vehicle
90	1997	Gillig Bus	15GCB2016V1088641	Fixed-Route
91	1997	Gillig Bus	15GCB2018V1088642	Fixed-Route
92	2001	Gillig Bus	15GGE181811090568	Fixed-Route
Pick-up	2002	Dodge	1D7HA16K12J183054	Service Vehicle
Mini-bus	2002	Ford	1FDXE45S22HA86459	ADA paratransit
Explorer	2005	Ford	1FMDU72K15UA72785	Service Vehicle
403	1997	Gillig Bus	15GCB1813V1088241	Waiting Disposal
404	1997	Gillig Bus	15GCB1815V1088242	Waiting Disposal
406	1997	Gillig Bus	15GCB1817V1088243	Fixed-Route
416	1997	Gillig Bus	15GCB1811V1088254	Waiting Disposal
1003	2000	Ford Van	1FDXE45F5YHB62963	ADA paratransit
68	2000	Ford Van	1FDXE45F6YHB55200	ADA paratransit
72	2000	Ford Van	1FDXE45F21HA38638	ADA paratransit
53	2000	Ford Van	1FDXE45F51HA38634	ADA paratransit
73	2000	Ford Van	1FDXE45F1YHB55203	ADA paratransit
95	2007	Gillig Bus	15GGE291371091267	Fixed-Route
99	2007	Gillig Bus	15GGE291571091271	Fixed-Route
93	2007	Gillig Bus	15GGE291X71091265	Fixed-Route
97	2007	Gillig Bus	15GGE291771091269	Fixed-Route
100	2007	Gillig Bus	15GGE291771061272	Fixed-Route
101	2007	Gillig Bus	15GGE291971091273	Fixed-Route
98	2007	Gillig Bus	15GGE291371091270	Fixed-Route
96	2007	Gillig Bus	15GGE291571091268	Fixed-Route
94	2007	Gillig Bus	15GGE291171091266	Fixed-Route

Administrative, Operations, and Maintenance Facility

The Petersburg Station is the City's new multi-modal transportation center and offers off-street bus staging and passenger waiting for PAT, GRTC, BABS, Greyhound/Carolina Trailways, and taxicabs. The Station, bordered by Washington, Market, Wythe, and Union Streets in downtown Petersburg, is staffed, offering transit information, tourist information, and transit ticket sales. In addition to transportation functions, the station will also have office and retail space available for rent. The new facility will be ADA-accessible. Petersburg Station has bike racks and new pedestrian crossings, with signals, for each intersection that the site borders. The project serves both as a solution for PAT's transfer hub and a downtown revitalization opportunity.

Petersburg Station Nearing Completion- September 2009

Downtown Petersburg is the only PAT transfer hub, though there are other places in the City where more than one route is available.

Passenger Shelters

There are 33 passenger waiting shelters positioned throughout the PAT service area. Table 1-4 provides the shelter inventory by route.

Parking Lots

Commuter parking for the GRTC (Route 95) bus to Richmond is currently provided at a City-owned lot at Union and Tabb Streets (adjacent to the City Annex building). The City has proposed to charge $25 a month for commuters to use City-owned lots.

TRANSIT SECURITY PROGRAM

PAT has a "Safety/Security/Emergency Program Plan," dated February 2007 and revised in August 2008. The Plan describes the policies, procedures, and requirements that are in place in order to provide a secure environment for employees and contractors, and to support community emergency response.

The goals of the Plan are to:

"1. Ensure that safety and emergency preparedness are addressed during all phases of system operation, including the hiring and training of personnel; the

Table 1-4 : PAT Passenger Shelter Inventory

Route	Location	No. of Shelters
Washington St./Central State	Dupuy Road @ Summit St.	2
	W. Washington St. @ West St.	1
	Elm St. @ Church St.	1
Lee Avenue	Farmer St. @ Guarantee St.	1
	J.E.B. Elementary School	2
Halifax Street	Halifax St. @ Harding St.	1
	Halifax St. @ Tabernacle Church	1
	Custer St. @ Hawk St.	1
	Custer St. @ Halifax St.	1
Virginia Ave/Ettrick	None	0
Blandford/Hopewell/Ft. Lee	Banks @ Virginia Linen	2
	Pin Oaks Housing Development	2
	Fort Lee PX	1
Plaza Street	Sycamore St. @ Apollo	1
	Sycamore St. @ Lafayette House	1
	Sycamore St. @ Glenroy	1
South Crater Road	S. Crater @ Morton	1
	321 Poplar St.- Health/Wellness Ctr.	1
	2007 S. Crater- Blockbuster	1
Walnut Hill	Tanglewood Apts	1
	Johnson Rd @ Lieutentant Run Apts	2
South Park Mall	Theater/north side	2
(pending route change)	Medical Park Boulevard	1
Downtown	Franklin Street	2
	Union Street	2
	Tabb Street	1
TOTAL SHELTERS		33

procurement and maintenance of agency equipment; the development of policies, rules, and procedures; and coordination with local public safety and community emergency action planning agencies.

2. Promote analysis tools and methodologies to encourage safe system operation through the identification, evaluation and resolution of threats and vulnerabilities, and the on-going assessment of agency capabilities and readiness.

3. Create a culture that supports employee safety (during normal and emergency conditions) through motivated compliance with agency rules and procedures and the appropriate use and operation of equipment."

The Plan includes the identification of staff responsibilities and actions for the various aspects of the Plan including management, training, incident response, planning, and implementation.

Fare Collection

At the end of the service day the maintenance team pulls the fareboxes from the buses and puts them in a secure vault. The maintenance team then places empty fareboxes in the vehicles to prepare for service on the following day. The account manager pulls the fares from the boxes the following morning, counts, records and secures the funds with oversight by the administrative manager.

PUBLIC OUTREACH

As a City Department the primary means of public outreach is conducted through the City Council's public meeting process. Service and policy changes are discussed at regularly scheduled, open, City Council meetings. Public comment is afforded at these meetings that are generally held twice a month. Public notices are also posted on the City's website.

STIMULUS PROJECTS

Funding from the American Reinvestment and Recovery Act (ARRA) was awarded to Petersburg Area Transit for the following projects:

- Two replacement paratransit vehicles ($110,000)

- Construction of the multi-modal center- project change orders resulted in the need for an additional $500,000
- Furnishings for the multi-modal center ($69,000)
- ADP Software ($10,000)
- ADP Hardware- three computers, copiers, scanners, and printers for the multi-modal center ($10,750)
- Shop equipment- the replacement of existing floor jack lifts ($120,000)
- Purchase and installation of a generator to support the multi-modal center ($150,000)
- Vehicle locator system ($63,927)
- New communications system ($145,000)
- Signage -- bus stop signs and poles ($5,000)
- Rehabilitation/renovation of some bus stop locations to enhance ADA accessibility, including concrete repairs and curb cuts ($200,000)

Chapter 2

Goals, Objectives, and Standards

This chapter presents the Petersburg Area Transit (PAT) mission, presents a set of goals for the system, articulates the goals and issues for the Transit Development Plan (TDP), and presents a set of performance standards for the system.

PAT MISSION AND GOALS

The mission of PAT is to provide safe, secure, and reliable service for its passengers and employees. PAT has had various goals over the years, but does not have an adopted set of goals for the program. It is important that PAT have specific goals, objectives, and service standards to help guide the system and objectively measure if the system is accomplishing its mission.

Goals

Goals are broad and general, providing policy guidance as to how the mission of PAT should be accomplished. The following goals have been drafted during this TDP process for PAT. It should be noted that these goals will need to be adjusted if a more regional transit structure emerges in the Tri-Cities.

1. Provide access to employment opportunities for area residents.

2. Help ensure that the area's senior citizens can continue to participate fully in the community without driving.

3. Provide transportation options for city residents with disabilities.

4. Offer safe, dependable, and convenient access to medical facilities, employment areas, shopping centers, schools, and community agencies.
5. Strengthen coordination and explore partnerships between the City of Petersburg and the Cities of Hopewell and Colonial Heights, the Counties of

Chesterfield, Dinwiddie, and Prince George, Fort Lee, major employers, educational facilities, and other private entities to ensure effective service delivery in the community.

6. Manage, maintain, and enhance the existing public transportation system.

TDP GOALS AND ISSUES

The Technical Committee for the Tri-Cities Area Metropolitan Planning Organization served as the Steering Committee for the TDP. At the initial meeting for the project, the following goals and issues were established and discussed.

Goal 1: Develop a vision for public transportation in the Tri-Cities.

Issues:

- What level of public transportation services are desired by the communities?
- What level of public transportation is affordable?
- What is the constrained and unconstrained vision for transit in the region?

Goal 2: Develop a good understanding of the jurisdictional origins of the current riders by route.

Issues:

- Jurisdictional leaders need to know if their citizens are using particular services before they can make decisions regarding funding assistance.
- Developing a good understanding of ridership patterns is necessary for effective service planning.

Goal 3: Develop agreements with local jurisdictions to help pay an equitable portion of the local funding required to operate the level of services desired for the region.

Issues:

- Prior to the expansion of the Richmond Urbanized Area, PAT was able to use Federal Transit Administration (FTA) S.5307 funds to help fund operating expenses for transit and could afford to extend service to other jurisdictions without financial contributions from the jurisdictions served. PAT is no longer eligible to use S.5307 funds for operating expenses and needs local

funding partners if services are to be operated outside of the City of Petersburg.

- The other local jurisdictions have not been asked to fund transit in the past and need to be educated as to how much would be an equitable share and how their residents and businesses would benefit.

Goal 4: Continue to meet the needs of the existing PAT riders while expanding where feasible.

Issues:

- PAT is a division of City Government and its priority is to meet the needs of City residents.

- There are regional opportunities, including those that would potentially help Petersburg City residents, but additional local/regional funding streams are needed for expansion to occur.

- There are regional public transportation needs.

Goal 5: Study existing routes to see if there are opportunities to make changes that would better serve the riders and increase ridership.

Issues:

- There are areas that need service, but are not yet served (hotels near Fort Lee, new apartment complexes).

- There may be under-performing portions of some routes that could be eliminated.

Goal 6: Help Fort Lee devise an appropriate mobility solution for its student-soldiers and other members of the Fort Lee community.

Issues:

- Soldiers come to Fort Lee from other areas of the U.S. for training for limited periods of time. They typically do not have cars available and they are not familiar with the area.

- The soldiers have limited free time and would like to get to the South Park Mall area from Fort Lee in the shortest time possible, with service available on weekends, and possibly evening trips.

- The current bus route is geared to getting workers from Petersburg to Fort Lee. The trip from Fort Lee to the South Park Mall requires a transfer and is time-consuming.

- Fort Lee is expanding due to Base Realignment and Closure (BRAC) and there is substantial new development on the Fort and near the Fort. There may be additional transit needs for employment or dependents.

Goal 7: Develop a public transportation service between Petersburg and Hopewell along the Route 36 Corridor

Issues:

- There are several major employers in Hopewell.

- Hopewell is interested in looking at this opportunity.

- This could also address Fort Lee needs.

Goal 8: Continue to partner with Virginia State University (VSU) to help meet student, faculty, and staff mobility needs while helping PAT's revenue and ridership.

Issues:

- VSU currently pays a monthly fee to PAT based on ridership that is tracked by PAT. Students ride fare-free by showing their student identification cards.

- VSU is expanding and there may be additional opportunities.

Goal 9: Develop a good understanding of how the Greater Richmond Transit Company (GRTC) Richmond route and the Blackstone Area Bus System (BABS) Blackstone Bus route can be better integrated with the PAT network.

Issues:

- GRTC operates a bus route between Richmond and Petersburg.

- The Blackstone Bus operates from rural Dinwiddie County to Petersburg.

- The jurisdictional origins of these riders are not known, and it is not currently known if riders transfer among these services.

- The new Petersburg intermodal terminal provides an improved connection location for these regional services.

These goals were considered throughout the development of the TDP.

SERVICE STANDARDS

Service standards are benchmarks by which service performance is evaluated. Service standards are typically developed in several categories of service, such as service coverage, passenger convenience, fiscal condition, and passenger comfort. The most effective service standards are straightforward and relatively easy to calculate and understand.

While PAT does use ridership data to make service planning decisions, PAT does not currently have defined service standards. It is recommended that PAT implement several basic service standards to help evaluate service on a regular basis to ensure that PAT is carrying out its mission in the most effective manner possible.

Table 2-1 presents service standards suggested for PAT. Some of the standards are policy-oriented and other measures are data-driven and were calculated as part of the detailed analyses of routes and services.

Table 2-1: Service Standards

Category	Standard

Availability
 	
Service availability is a direct reflection of the level of financial resources available for the transit program. Service coverage, frequency, and span of service are considered under the category of "availability."
	Service Coverage:
	• Residential areas:
	  o Areas with population densities of 2,000 people +
	• Major activity centers:
	  o Employers or employment concentrations of 200+
	  o Health centers
	  o Middle and high schools
	  o Colleges/ universities
	  o Shopping centers of over 25 stores or 100,000 sf
	  o Social service/government centers

	Span: 6:00 a.m. to 7:15 p.m. Monday through Thursday 6:00 a.m. to 8:15 p.m. on Fridays 7:15 a.m. to 8:15 p.m. on Saturdays
	Patron Convenience
Loading	25% standees for short periods acceptable
Bus Stop Spacing	5 to 7 stops per mile in core Fringe: 4 to 5 per mile, as needed based on land uses
Dependability	No missed trips -- 95% on-time service (0 to 5 minutes late)-- No trips leaving early

	Fiscal Condition
Farebox Recovery	Review and modify, if possible, services that exhibit less than 60% of average Review and modify, if warranted, services between 60% and 80% of average Average is currently 16%
Productivity (Pass./rev. hour)	Review and modify, if possible, services that exhibit less than 60% of average Review and modify, if warranted, routes between 60% and 80% of average Fixed-route average is currently 15.75 trips per revenue hour. ADA paratransit is currently 2.5 trips per revenue hour
Cost Effectiveness (Cost per trip)	Review and modify, if possible, services that exhibit less than 60% of average Review and modify, if warranted, routes between 60% and 80% of average Fixed-route average is currently $3.23 per trip ADA paratransit is currently $20.18 per trip
	Passenger Comfort
Waiting Shelters	25 or more boardings per day
Bus Stop Signs	Should have the system name, contact information, and route
Public Information	Timetable, maps, and website current and accurate
Revenue Equipment	Clean and good condition

Chapter 3

Service and System Evaluation and Transit Needs Analysis

SERVICE AND SYSTEM EVALUATION

Overall System Data

The operating statistics and performance measures for the PAT system were collected from the National Transit Database (NTD) for Fiscal Years 2003 through 2007. For FY 2009, these data were collected directly from PAT, on a route level basis. These data are shown in Table 3-1 and Table 3-2a and 3-2b. Tables 3-2a and 3-2b provide the same data, with Table 3-2b ranked by cost per passenger trip.

Ridership has grown steadily from its low point in 2004, from 470,683 (FY 2004) to 615,478 (FY 2009). These data represent a ridership increase of 31% over the five-year period. It should be noted that revenue service hours also increased over this time period, from a total of 36,951 (FY 2004) to 42,522 (FY 2009), an increase of 15%. When taken together, these two data points show an increase in service effectiveness, from 14.24 trips per revenue hour (fixed-route) to 15.75 trips per revenue hour. It should be noted that the data from the boarding/alighting surveys indicate a fixed-route weekday productivity of 22.1 trips/hour.

The operating expenses have increased over time, from $ 1,592,333 in FY 2004 to $ 2,168,830 in FY 2009. The FY 2010 operating budget is $2,680,000, reflecting the higher operating expenses for the Petersburg Station and the $150,000 payment to GRTC to help support the Petersburg-Richmond route. The transit operating budget is funded through fare revenue, federal aid, state aid, and local general fund revenue.

Peer Review

Peer data were gathered from five other transit programs for the peer review analysis. The peers were chosen primarily based on the number of vehicles in

Table 3-1: Petersburg Area Transit- Operating Statistics and Performance Measures
2003-2007

	Passenger Trips		Revenue Hours		Revenue Miles		Trips/Rev.Hour		Trips/Rev.Mile		Miles Per Hour	
Year	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response
2003	475,672	17,875	31,997	4,444	450,562	43,316	14.87	4.02	1.06	0.41	14.08	9.75
2004	463,023	7,660	32,507	4,444	441,560	48,156	14.24	1.72	1.05	0.16	13.58	10.84
2005	464,797	8,003	32,591	4,719	445,378	44,484	14.26	1.70	1.04	0.18	13.67	9.43
2006	491,404	8,968	38,532	4,716	411,616	44,072	12.75	1.90	1.19	0.20	10.68	9.35
2007	558,481	8,150	42,179	4,689	431,704	31,789	13.24	1.74	1.29	0.26	10.24	6.78

	Operating Expenses		Fare Revenue		Cost Per Trip		Cost Per Hour		Cost Per Mile		Farebox Recovery	
Year	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response	Fixed-Route	Demand-Response
2003	$ 1,387,797	$ 88,495	$ 337,912	$ 7,439	$ 2.92	$ 4.95	$ 43.37	$ 19.91	$ 3.08	$ 2.04	24%	8%
2004	$ 1,471,511	$ 120,822	$ 339,199	$ 7,658	$ 3.18	$ 15.77	$ 45.27	$ 27.19	$ 3.33	$ 2.51	23%	6%
2005	$ 1,606,890	$ 133,405	$ 342,322	$ 8,239	$ 3.46	$ 16.67	$ 49.30	$ 28.27	$ 3.61	$ 3.00	21%	6%
2006	$ 2,103,542	$ 147,704	$ 413,795	$ 8,901	$ 4.28	$ 16.47	$ 54.59	$ 31.32	$ 5.11	$ 3.35	20%	6%
2007	$ 2,450,335	$ 158,448	$ 428,768	$ 7,242	$ 4.39	$ 19.44	$ 58.09	$ 33.79	$ 5.68	$ 4.98	17%	5%

Source: National Transit Database.

Table 3-2a: Petersburg Area Transit- Operating Statistics and Performance Measures
FY 2009

Route	Passenger Trips	Revenue Hours (1)	Revenue Miles	Fare Revenue	Annual Operating Cost	Trips/ Rev. Hour	Trips/ Rev. Mile	Miles Per Hour	Cost Per Trip
Washington Street	98,018	3,789	45,232	$ 55,032	$ 193,258	25.87	2.17	11.94	$ 1.97
Halifax Street/Plaza	92,007	3,932	43,181	$ 50,740	$ 200,552	23.40	2.13	10.98	$ 2.18
Lee Avenue	60,704	3,932	44,740	$ 32,811	$ 200,552	15.44	1.36	11.38	$ 3.30
Virginia Ave/Ettrick	59,857	4,023	44,778	$ 27,600	$ 205,193	14.88	1.34	11.13	$ 3.43
Blandford	63,830	3,958	39,850	$ 32,150	$ 201,878	16.13	1.60	10.07	$ 3.16
Walnut Hill	69,579	3,802	41,390	$ 42,620	$ 193,921	18.30	1.68	10.89	$ 2.79
South Crater Road	69,651	3,854	58,879	$ 43,055	$ 196,573	18.07	1.18	15.28	$ 2.82
CS/SVTC	8,909	3,198	24,504	$ 5,013	$ 163,114	2.79	0.36	7.66	$ 18.31
Hopewell/Fort Lee	34,933	3,854	47,971	$ 24,263	$ 196,573	9.06	0.73	12.45	$ 5.63
South Park Mall	47,648	4,088	23,981	$ 26,880	$ 208,508	11.66	1.99	5.87	$ 4.38
Total Fixed Route	605,136	38,430	414,506	$340,164	$ 1,960,122	15.75	1.46	10.79	$ 3.24
ADA Paratransit (2)	10,342	4,092	27,744	$ 10,436	$ 208,714	2.527	0.37	6.78	$ 20.18
Total	615,478	42,522	442,250	$350,600	$2,168,836				

Operating Expenses	$2,168,830
Cost Per Hour	$ 51.005
Cost Per Trip	$ 3.52
Farebox Recovery	16%

Source: Petersburg Area Transit.

(1) Hours by route are estimated based on the printed schedules, verified by actual total.
(2) Hours and farebox revenue for ADA are estimated, based on previous NTD data.

Table 3-2b: Petersburg Area Transit- Operating Statistics and Performance Measures- FY 2009
Sorted by Cost Per Trip

Route	Passenger Trips	Revenue Hours (1)	Revenue Miles	Fare Revenue	Annual Operating Cost	Trips/ Rev. Hour	Trips/ Rev. Mile	Miles Per Hour	Cost Per Trip
Washington Street	98,018	3,789	45,232	$ 55,032	$ 193,258	25.87	2.17	11.94	$ 1.97
Halifax Street/Plaza	92,007	3,932	43,181	$ 50,740	$ 200,552	23.40	2.13	10.98	$ 2.18
Walnut Hill	69,579	3,802	41,390	$ 42,620	$ 193,921	18.30	1.68	10.89	$ 2.79
South Crater Road	69,651	3,854	58,879	$ 43,055	$ 196,573	18.07	1.18	15.28	$ 2.82
Blandford	63,830	3,958	39,850	$ 32,150	$ 201,878	16.13	1.60	10.07	$ 3.16
Lee Avenue	60,704	3,932	44,740	$ 32,811	$ 200,552	15.44	1.36	11.38	$ 3.30
Virginia Ave/Ettrick	59,857	4,023	44,778	$ 27,600	$ 205,193	14.88	1.34	11.13	$ 3.43
South Park Mall	47,648	4,088	23,981	$ 26,880	$ 208,508	11.66	1.99	5.87	$ 4.38
Hopewell/Fort Lee	34,933	3,854	47,971	$ 24,263	$ 196,573	9.06	0.73	12.45	$ 5.63
CS/SVTC	8,909	3,198	24,504	$ 5,013	$ 163,114	2.79	0.36	7.66	$ 18.31
Total Fixed Route	605,136	38,430	414,506	$340,164	$ 1,960,122	15.75	1.46	10.79	$ 3.24
ADA Paratransit (2)	10,342	4,092	27,744	$ -	$ 208,714	2.527	0.37	6.78	$ 20.18
Total	615,478	42,522	442,250	$340,164	$2,168,836				

maximum service, the number of annual vehicle revenue hours, the geographic location (i.e., generally the southeast), and secondarily the service area size.

The peer data were gathered from the NTD, using FY 2007 data. These data are the most recent that are widely available. The following transit programs were chosen as peers: The City of Monroe, Louisiana; the City of Harrisonburg, Virginia; Fredericksburg Regional Transit; the City of High Point, North Carolina; and the City of Fairfax, Virginia. The basic operating and performance data are provided in Table 3-3.

As these data show, PAT falls just about in the middle of the group in terms of annual revenue hours. Compared to the peer systems, PAT serves an area that is smaller in size, both geographically and in terms of population. PAT's total annual ridership is significantly lower than most of the peer systems, reflecting the relatively small service area.

PAT's cost per trip is higher than the mean, the operating cost per revenue hour is lower than the mean, and the trips per hour are lower than the mean.

It should be noted that there are two unique circumstances about PAT that make it difficult to draw meaningful comparisons to peer agencies. These circumstances include the following:

- PAT is a relatively small transit system, but is classified under the large urban program, as the Tri-Cities urbanized area blended with the Richmond urbanized area as a result of the 2000 Census. There are other programs that also fall into this category, but many of these have other anomalies that are different from Petersburg (i.e., Williamsburg with its tourism industry).

- The actual service area is very small geographically, even though it is technically a "large urban program." Again, there are others that meet this criteria (the City of Fairfax), but often the other types of systems like this are in much larger urbanized areas than Richmond. It should be noted that the Fairfax Cue system provides feeder service to Metrorail, and it serves a large university (George Mason).

As with any peer comparison, it is most significant to review these data with the intent to see if PAT is generally within the expected ranges of performance when compared to other transit programs, rather than a mechanism to judge PAT against other programs. Given these peer data, we can say that PAT does fall within expected ranges of performance.

Table 3-3: FY 2007 Peer Data

Transit Program	Vehicles in Maximum Service	Service Area Size (sq.mi)	Service Area Population	Annual Revenue Hours	Annual Revenue Miles	Annual Unlinked Trips	Operating Expenses	Fare Revenue	Farebox Recovery
City of Monroe, LA	16	31	55,000	52,285	721,829	1,147,860	$ 3,194,562	$ 551,656	17%
City of Harrisonburg, VA	23	17	45,261	52,048	500,908	1,492,318	$ 2,592,747	$ 1,069,788	41%
Fredericksburg Regional Transit, VA	17	242	113,716	51,186	889,839	361,838	$ 2,491,330	$ 54,963	2%
City of Petersburg	17	7	31,300	46,868	463,493	566,631	$ 2,608,783	$ 436,010	17%
City of High Point, NC	14	52	94,973	42,503	521,299	752,497	$ 2,278,501	$ 476,531	21%
City of Fairfax, VA	8	6	21,000	33,994	432,595	1,135,758	$ 2,869,535	$ 581,435	20%
Mean	15.8	59.2	60,208	46,481	588,327	909,484	$ 2,672,576	$ 528,397	20%

Transit Program	Trips/ Hour	Cost/ Trip	Trips/ Capita	Cost/ Hour
City of Harrisonburg, VA	28.7	$ 1.74	32.97	$ 49.81
City of Fairfax, VA	33.4	$ 2.53	54.08	$ 84.41
City of Monroe, LA	22.0	$ 2.78	20.87	$ 61.10
City of High Point, NC	17.7	$ 3.03	7.92	$ 53.61
City of Petersburg	12.1	$ 4.60	18.10	$ 55.66
Fredericksburg Regional Transit, VA	7.1	$ 6.89	3.18	$ 48.67
Mean	20.15	$ 3.59	22.86	$ 58.88

Source: National Transit Database.

Route Evaluation

This section of the report provides the detailed analysis of each fixed-route, using both historical data (FY 2009) and primary data (collected via boarding/alighting counts and passenger surveys.) Table 3-4 provides the boarding and productivity data for all of the routes, as collected in October, 2009.

Washington Street/Central State Hospital

For FY 2009, the Washington Street route exhibited the highest productivity in the PAT fixed-route network, providing 25.9 passenger trips per revenue hour. The operating cost per passenger trip for the Washington Street Route was also the lowest at $1.97. Early in the current fiscal year, the Washington Street route was combined with the Central State route. This combination makes sense, given the low ridership and productivity seen in FY 2009 on the Central State route. The total FY 2009 ridership on the Washington Street route was 98,018 passenger trips and the FY 2009 ridership on the Central State route was 8,909 passenger trips.

The most heavily used stops on the Washington Street/Central State route include: Downtown Petersburg; Elm St./Church Street; Elm St./Farmer Street; and Summit St./Farmer Road. There is consistent activity along the entire route. The Central State portion of the route exhibited the lowest activity, but also has the lowest level of service. There were only five weekday boardings outside of the City of Petersburg on this route. Figure 3-1 provides a map portraying the Washington Street/Central State bus stop activity.

Weekday ridership by time of day is shown in Figure 3-2. On the day of the boarding/alighting counts, the highest ridership run was at 12:15 p.m. with almost 30 passengers riding. The first three runs of the day also exhibited ridership of between 25 and 30 passengers per vehicle trip. It should be noted that the runs should not all be considered equal in evaluating ridership, as the route offers two vehicle trips per hour when it does not serve Central State, rather than one. The result is that each of the 30-minute runs generally has lower ridership than the hourly runs, with the exception of the 12:15 p.m. run. As the boarding data indicate, the Saturday ridership is only 34% of the weekday ridership

There were some comments received via the on-board survey that expressed the desire to separate the Central State and Washington Street routes so that more trips are provided to Central State and the Washington Street headways are 30 minutes throughout the service day.

Table 3-4: Boarding Data and Productivity by Route

Route	Thursday Ridership	Percent Total	Saturday Ridership	Percent Total	Rev. Hours Thurs.	Rev. Hours Sat.	Trips/Hr. Thurs.	Trips/Hr. Sat.
Washington Ave/Central State	317	14%	108	8%	12.75	12.50	24.9	8.6
Lee Avenue- Pecan Route	104	5%	56	4%	6.25	6.13	16.6	9.1
Lee Avenue- Young Route	88	4%	70	5%	6.25	6.13	14.1	11.4
Halifax	154	7%	146	11%	6.25	5.75	24.6	25.4
Virginia Avenue	59	3%	54	4%	6.125	6.00	9.6	9.0
Plaza	134	6%	94	7%	6	6.00	22.3	15.7
Ettrick	220	10%	109	8%	6.25	6.25	35.2	17.4
Blandford/Hopewell/Fort Lee	356	16%	133	10%	13	13.00	27.4	10.2
Walnut Hill	251	11%	154	11%	12	11.00	20.9	14.0
South Crater	321	14%	219	16%	12.5	12.50	25.7	17.5
Southpark Mall	219	10%	219	16%	13	12.75	16.8	17.2
Totals	2,223		1,362		100	98	22.1	13.9

Figure 3-1: Washington Street Route Bus Stop Activity

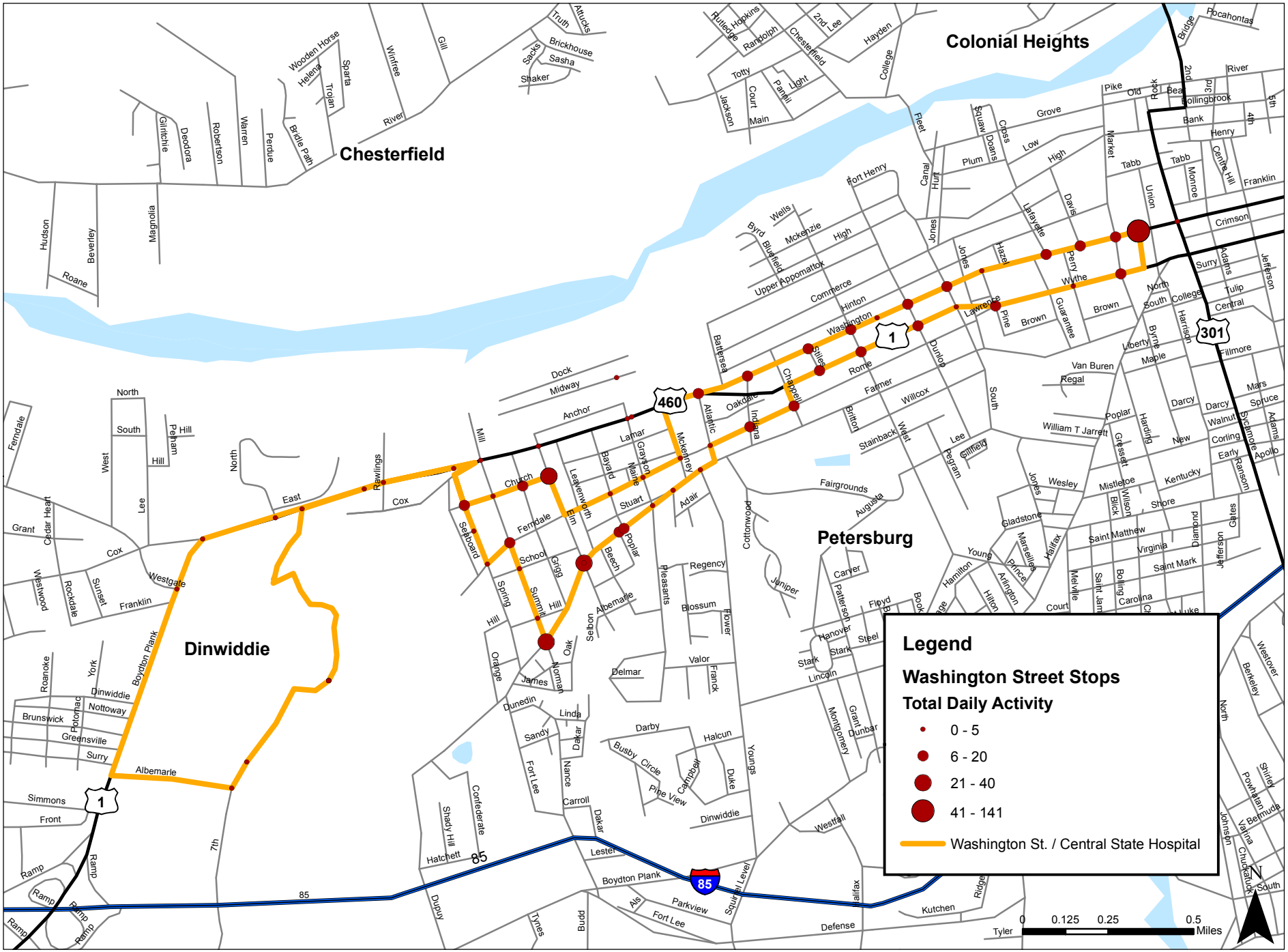
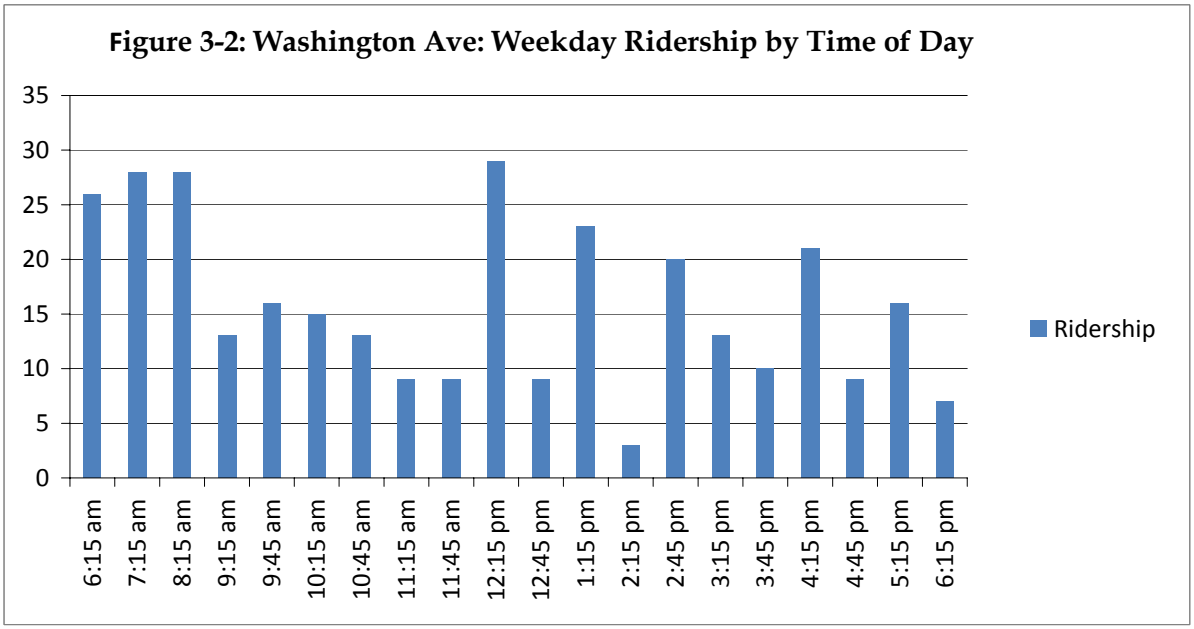


Figure 3-2: Washington Ave: Weekday Ridership by Time of Day



Halifax Route

In FY 2009 the combination of the Halifax and Plaza routes exhibited the second highest productivity in the route network (23.4 trips/hour) and the second lowest cost per passenger trip ($2.18). The total ridership on the combined routes was 92,007 passenger trips. These routes were analyzed separately for the boarding/alighting counts.

The boarding and alighting data (from October 2009) indicate that Thursday ridership (154 trips) was only slightly higher than the Saturday ridership (146). The Halifax route exhibited the highest Saturday productivity during the boarding/alighting counts (25.4 passenger trips per hour).

The most heavily used stops on the Halifax route are the downtown transfer opportunity; Patterson/Dunbar; and the Valero Gas Station. There is consistent passenger activity along the route. Figure 3-3 provides a map portraying the bus stop activity for the boarding/alighting survey days. As shown in Figure 3-4**,** the Halifax route exhibits the highest ridership in the afternoons.

There were comments received via the on-board survey that requested 30-minute service on the Halifax route.

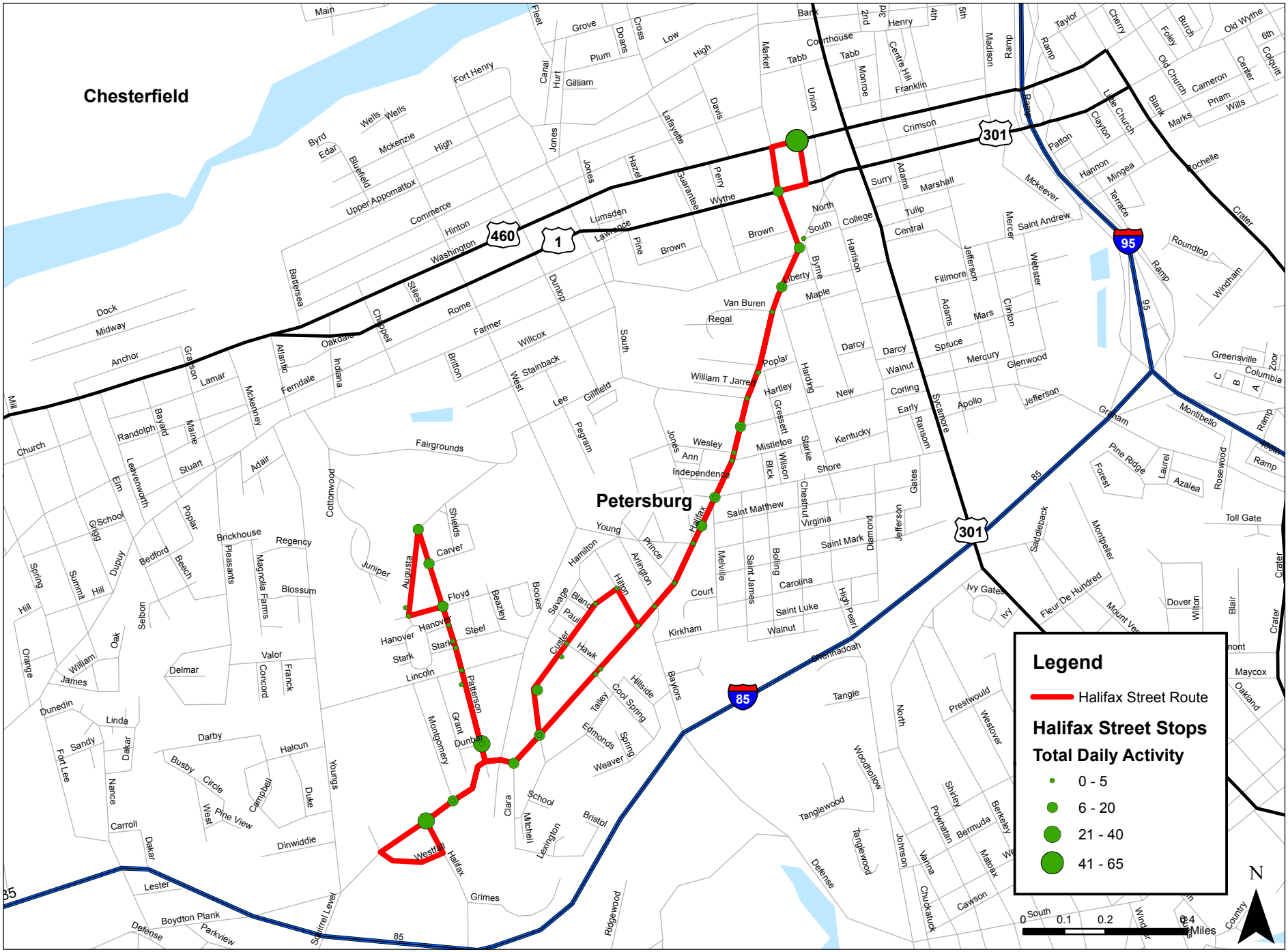
Lee Avenue

The Lee Avenue route has two different routing arrangements, serving either Pecan Acres or Youngs Road on alternating trips. The trunk portion of the route offers 30-minute headways, while each of the two legs offers hourly headways. In FY 2009, the Lee Avenue route provided 60,704 passenger trips with a productivity of 15.4 passenger trips per revenue hour (slightly lower than the fixed-route mean of 15.75 trips per hour). The FY 2009 cost per trip was $3.30.

The boarding and alighting data indicated the Pecan Acres portion of the route had higher weekday ridership (104 trips) than the Youngs Ave portion of the route (88), while this pattern was reversed on Saturday, with the Pecan Acres portion of the route having ridership of 56 trips and the Youngs Road portion providing 70 trips. Productivity on the route ranged from a high of 16.6 trips per hour (Pecan Acres-weekday) to a low of 9.1 passenger trips per hour (Pecan Acres- Saturday).

The bus stops with the most passenger activity are the downtown transfer stop, Virginia Textile, Farmer/West Streets, and Pecan Acres. Figure 3-5 provides a map of the bus stop activity based on the boarding/alighting count data.

Figure 3-3: Halifax Street Route Daily Bus Stop Activity



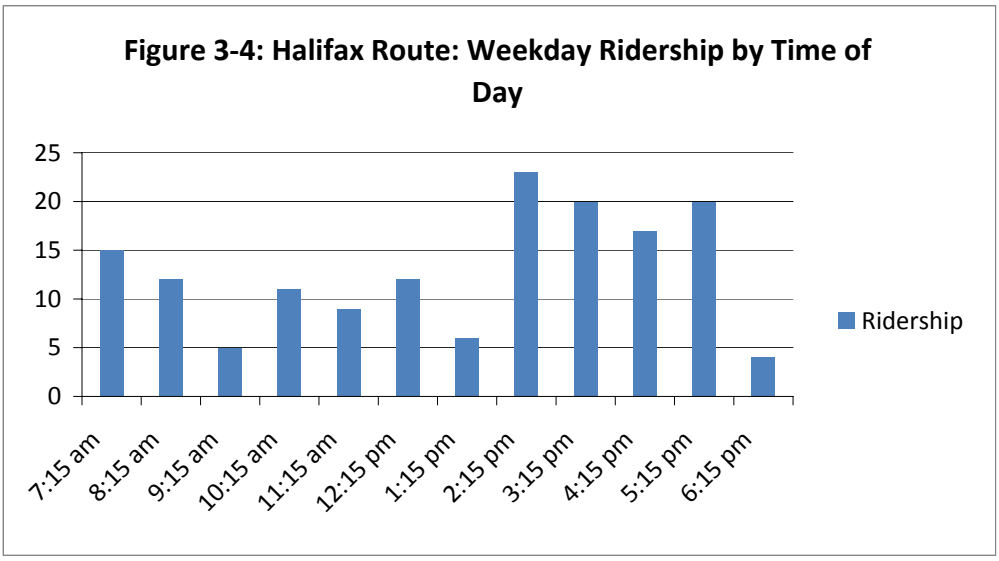
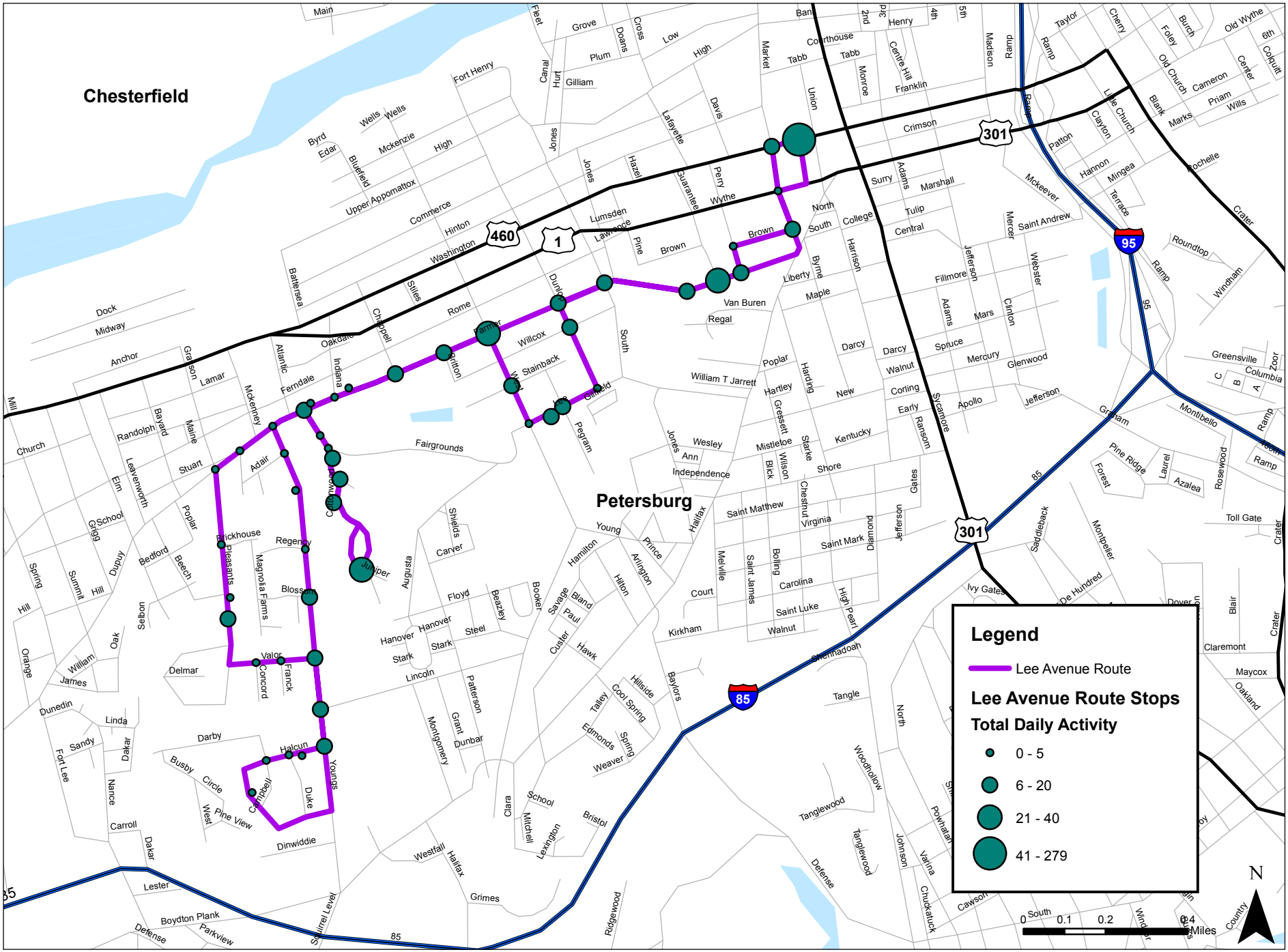


Figure 3-4: Halifax Route: Weekday Ridership by Time of Day
25
20
15
10
5
0
7:15 am
8:15 am
9:15 am
10:15 am
11:15 am
12:15 pm
1:15 pm
2:15 pm
3:15 pm
4:15 pm
5:15 pm
6:15 pm
Ridership

Figure 3-5: Lee Avenue Via Pecan and Young Daily Bus Stop Activity



Figures 3-6 and 3-7 show the ridership by time of day for both portions of the route. The 7:45 a.m. trip (Youngs Avenue) exhibited the highest ridership (14 trips).

Virginia Avenue

The Virginia Avenue route provides hourly headways and is paired with the Ettrick route. On select trips the Virginia Avenue route provides express service to Petersburg High School. The combined Virginia Avenue/Ettrick route provided 59,857 passenger trips in FY 2009, with a productivity of 14.9 trips per revenue hour. The cost per passenger trip in FY 2009 was $3.43.

According to the boarding/alighting data, the productivity on the route (both Thursday and Saturday) was among the lowest in the system at 9.6 trips per hour (weekday) and 9.0 trips per hour (Saturday). There were 59 passenger trips provided on this route on Thursday and 54 passenger trips on Saturday.

As is shown in Figure 3-8, the local portion of the route exhibits much more activity than the express portion.

The 7:45 a.m. run exhibits the highest ridership, followed by the 6:15 p.m. run. Ridership is light mid-day on this route. The ridership by time of day is shown in Figure 3- 9.

Plaza

The Plaza route is paired with the Halifax route and provides service along Sycamore Street to the shopping areas adjacent to the intersection of Sycamore Street and Crater Road. Hourly headways are provided on the Plaza route. The combined route provided 92,007 passenger trips in FY 2009, with productivity of 23.4 passenger trips per revenue hour (significantly higher than the fixed route mean of 15.75 trips per hour). The cost per trip was $2.18.

There were 134 passenger trips provided on Thursday and 94 passenger trips provided on Saturday during the boarding/alighting counts. Productivity on the route was 22.3 trips per revenue hour on Thursday (above the system mean) and 15.7 trips per hour (equal to the mean) on Saturday.

Passenger activity is geographically dispersed along the route, with the following stops exhibiting the highest activity: the downtown transfer stop, Butterworths, and Sycamore/Goodrich. These data are shown in Figure 3-10.

Figure 3-6:
Lee Avenue-Pecan Acres Weekday Ridership by Time of Day

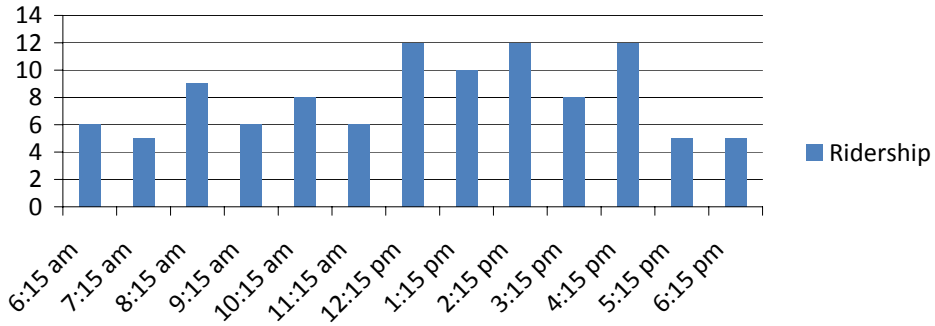


Figure 3-7: Lee Avenue-Young Ave. Weekday Ridership by Time of Day

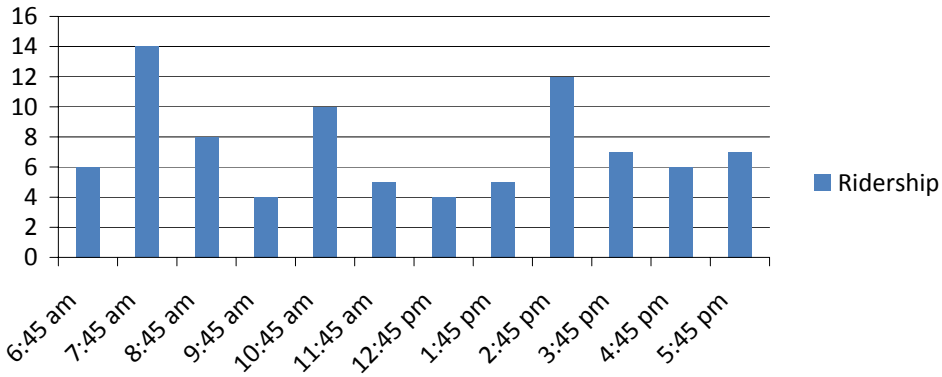


Figure 3-8: Virginia Avenue Local and Express Bus Stop Activity

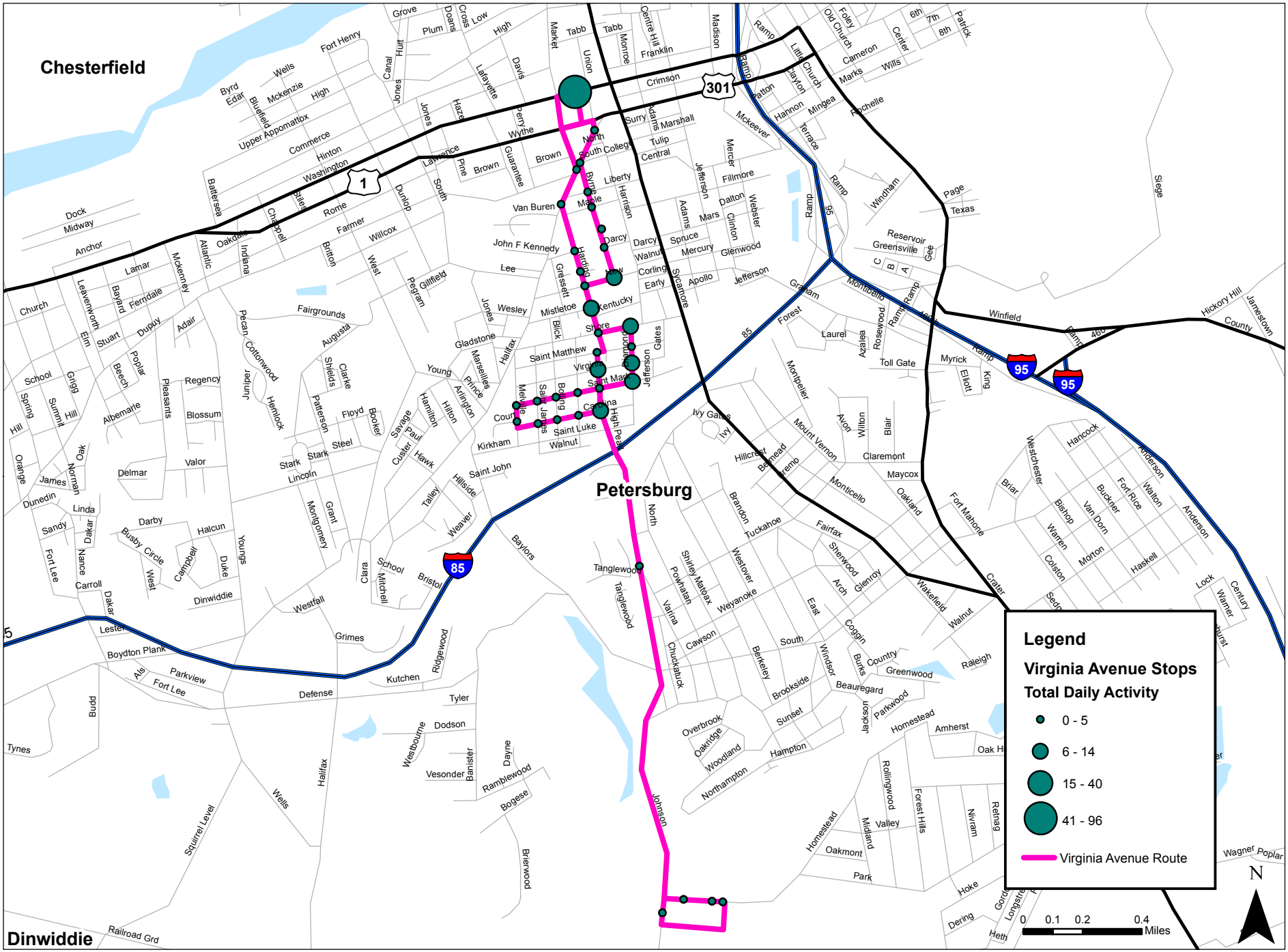


Figure 3-9:
Virginia Avenue- Weekday Ridership by Time of Day

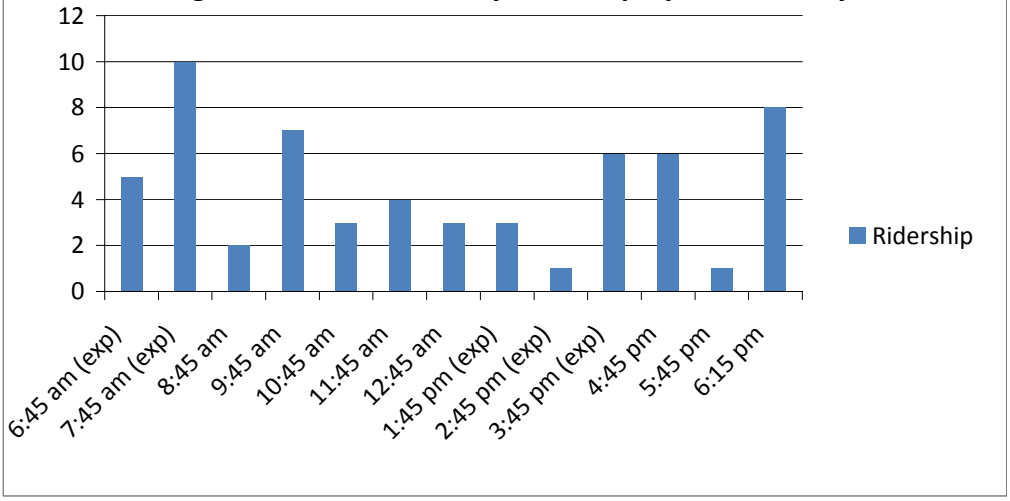
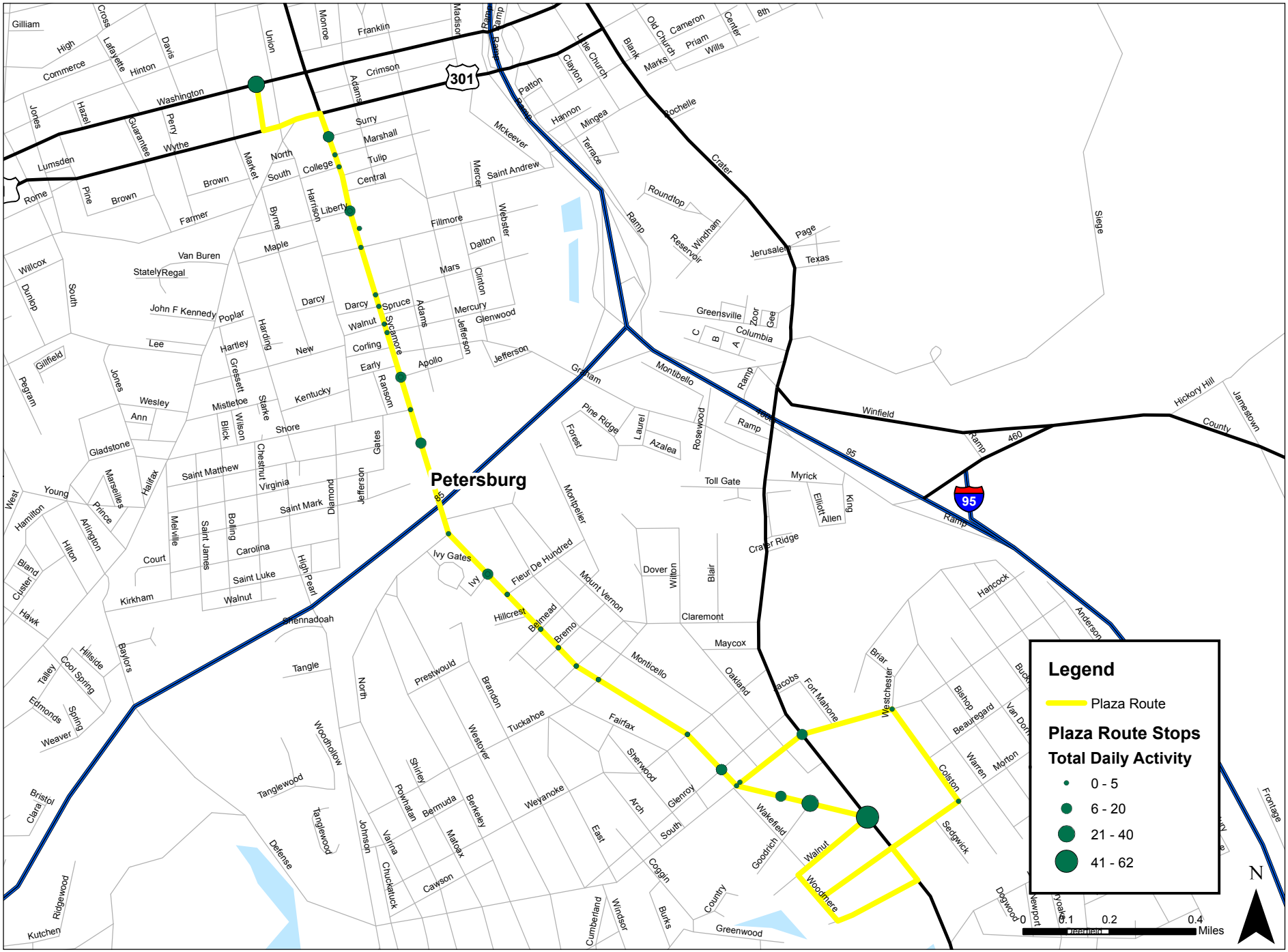


Figure 3-10: Plaza Route Daily Bus Stop Activity



The afternoon ridership is higher than the morning ridership, with the 12:45 p.m. run exhibiting the highest ridership of the service day. Figure 3-11 shows the ridership by time of day.

Ettrick

As previously discussed, the Ettrick route is paired with the Virginia Avenue route and offers hourly headways. Select trips also serve Pocohontas Island. The combined Virginia Avenue/Ettrick pair provided 59,857 passenger trips in FY 2009. The productivity on the route pair was 14.88 trips per hour and the cost per trip was $3.43.

The boarding data showed that the Ettrick route is the most productive in the system, providing 220 trips on Thursday (35.2 trips per hour) and 109 trips on Saturday (17.4 trips per hour). The busiest stops include the two downtown stops on Sycamore Street, the Shopping Center in Ettrick, and the main VSU stop on campus (Lee/University). Of the total 220 weekday boardings, 125 of them were not in the City of Petersburg. There were 82 boardings on the VSU campus and 43 daily boardings in Chesterfield County. Figure 3-12 provides a map of the passenger activity by stop.

Ridership by time of day varied, with the highest ridership run occurring at 3:15 p.m. These data are shown in Figure 3-13.

One comment received via the on-board survey suggested that the Ettrick route should serve River Road, as there are people who do not have cars in the neighborhoods off of River Road.

Blandford/Hopewell/Fort Lee

The Blandford/Hopewell/Fort Lee route is a combination of the former Blandford and Hopewell/Fort Lee routes. In FY 2009, the routes together provided 98,763 passenger trips. The Blandford route provided 16.1 passenger trips per revenue hour and the Hopewell/Fort Lee route provided nine trips per revenue hour in FY 2009. The cost per trip was $3.16 and $5.63, respectively.

The combined route was in operation for the boarding/alighting survey. This route provided 356 passenger trips on Thursday (the highest of any of the routes) and 133 passenger trips on Saturday. The productivity was 27.4 passenger trips per hour on Thursday and 10.2 passenger trips per hour on Saturday.

The busiest stops on this route were the downtown transfer stop, Bank Street/Crater Road, Fort Lee, and the Crossings Shopping Center. Of the 356 boardings, 73 were not in the City of Petersburg. There were 37 weekday boardings in

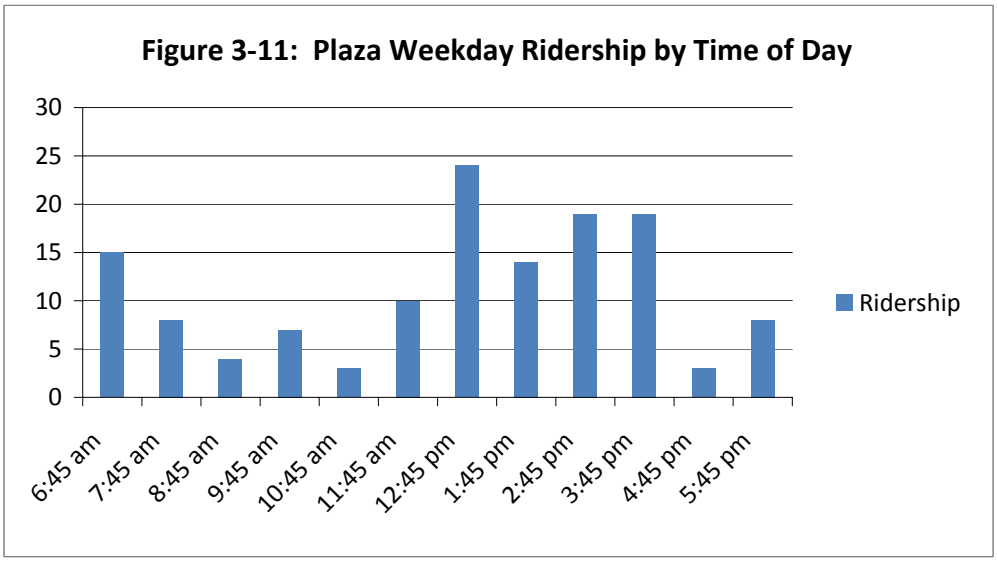


Figure 3-11: Plaza Weekday Ridership by Time of Day
30
25
20
15
10
5
0
6:45 am
7:45 am
8:45 am
9:45 am
10:45 am
11:45 am
12:45 pm
1:45 pm
2:45 pm
3:45 pm
4:45 pm
5:45 pm
Ridership

Figure 3-12: Ettrick Route Daily Bus Stop Activity

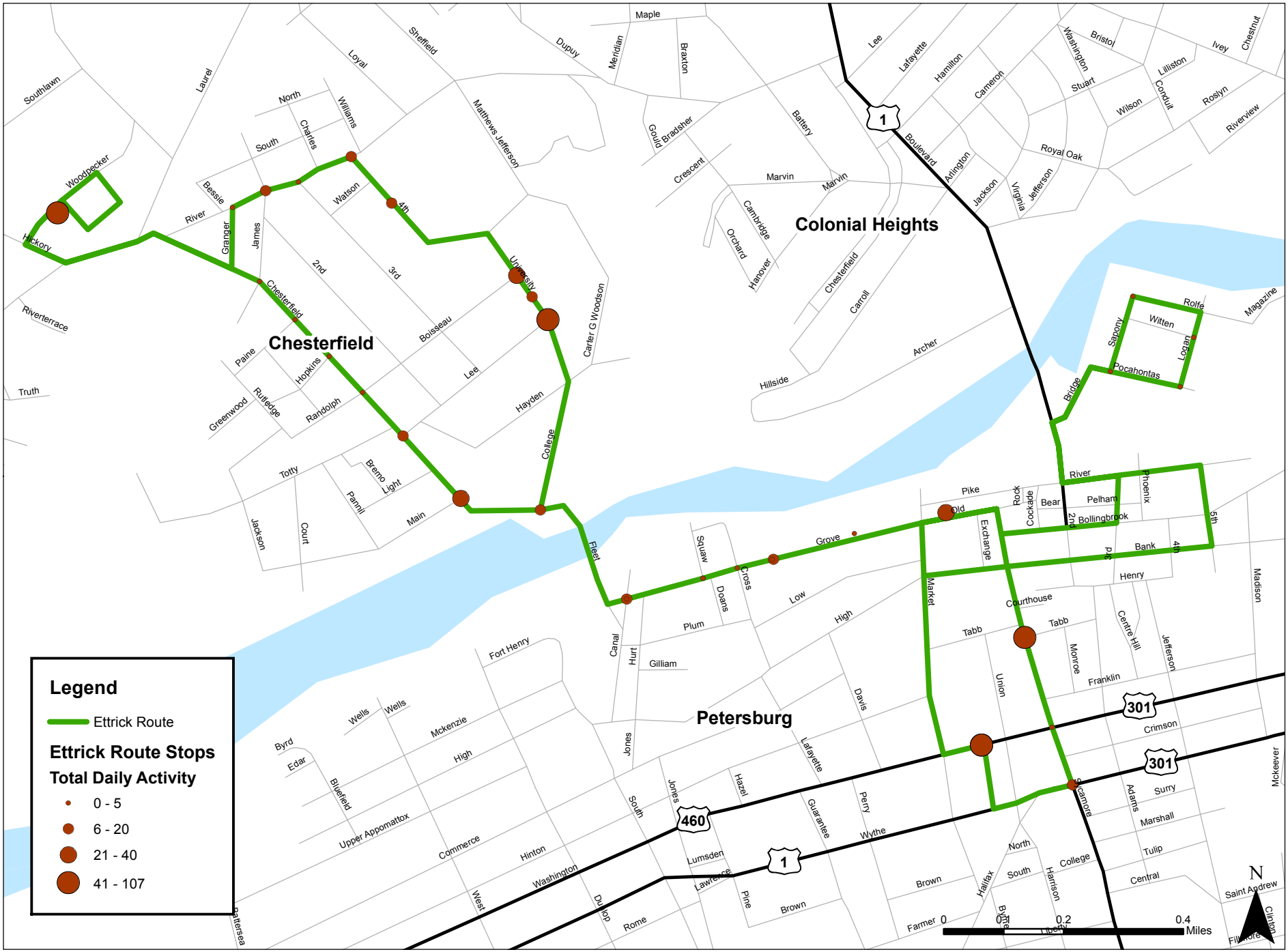
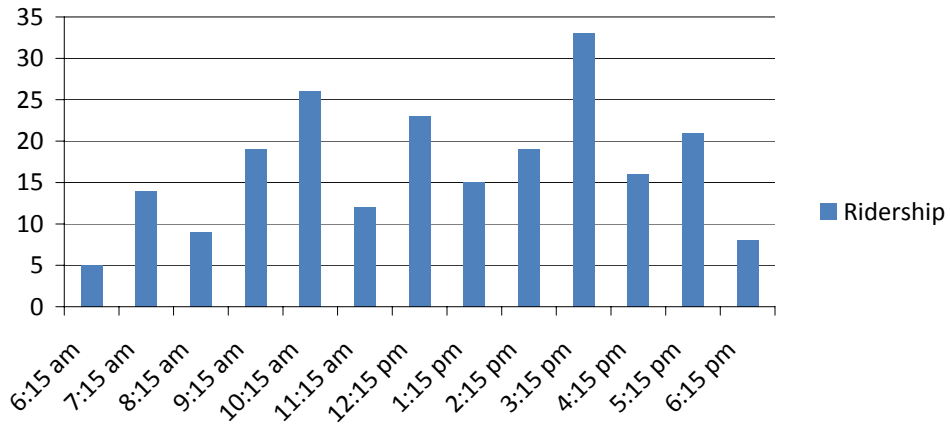


Figure 3-13: Ettrick Weekday Ridership by Time of Day



Prince George County, 25 weekday boardings in Fort Lee, and 11 boardings in Hopewell. Figure 3-14 provides a map of the ridership by stop. The busiest run of the day was the 8:15 a.m. run (46 passengers) - this run brings young people to the Blandford Academy for school. Other busy runs included the 1:15 p.m. run, the 11:15 a.m. run, and the two mid-afternoon runs (3:15 p.m. and 4:15 p.m.). The ridership by time of day is provided in Figure 3-15.

It was noted that the combined route was somewhat inconvenient for the riders who previously used the Blandford route, as they currently must travel all the way to Fort Lee and Hopewell to get to the Blandford Academy and the Bank Street portion of the Blandford route.

Comments received via the on-board survey requested that the Blandford and Ft. Lee/Hopewell route be returned to two routes, as the route is too long for the Blandford riders.

Walnut Hill

In FY 2009 the Walnut Hill route provided 69,579 passenger trips, with higher than average route productivity (18.3 trips per revenue hour). The cost per trip in FY 2009 was $2.79, lower than the fixed-route average of $3.24. Walnut Hill operates on hourly headways.

During the boarding/alighting time period, the route provided 251 passenger trips on Thursday (20.9 trips per hour) and 154 trips on Saturday (14 trips per hour). The busiest stops on the route are the downtown transfer stop and the South Crater Road Wal-Mart**.** Figure 3-16 provides a map of the ridership by stop. As the map indicates, there is very little ridership in the Deerfield neighborhood and no ridership in the Berkeley Manor neighborhood on this route. There are three neighborhoods that are served by both the Walnut Hill and S. Crater Road routes (Deerfield, Berkeley Manor, and Flank Road).

The 10:45 a.m. run was the busiest during the boarding/alighting counts. These data are shown in Figure 3-17.

South Crater Road

Ridership on the South Crater Road route is very similar to ridership on the Walnut Hill route, with 69,651 passenger trips provided in FY 2009. Productivity is also similar at 18 passenger trips per revenue hour. The South Crater Road route recorded the most revenue miles in FY 2009 at 58,879.

Figure 3-14: Blandford/Hopewell/Fort Lee Route Daily Bus Stop Activity

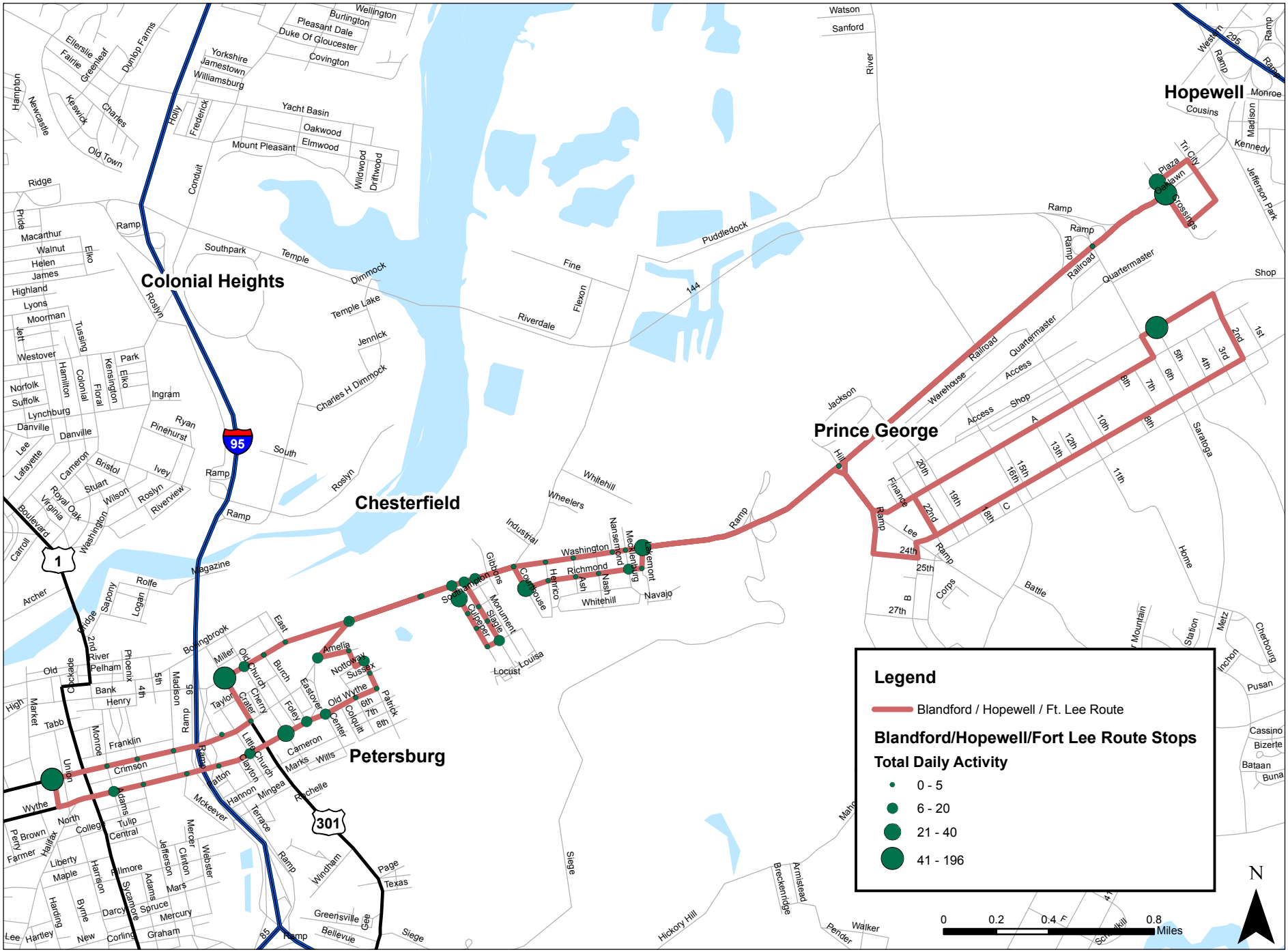


Figure 3-15: Blandford/Hopewell/Fort Lee Weekday Ridership by Time of Day

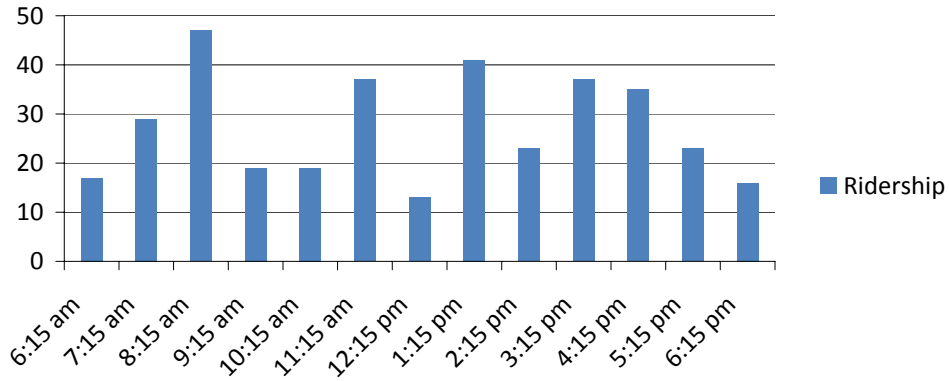


Figure 3-16: Walnut Hill Route Daily Bus Stop Activity

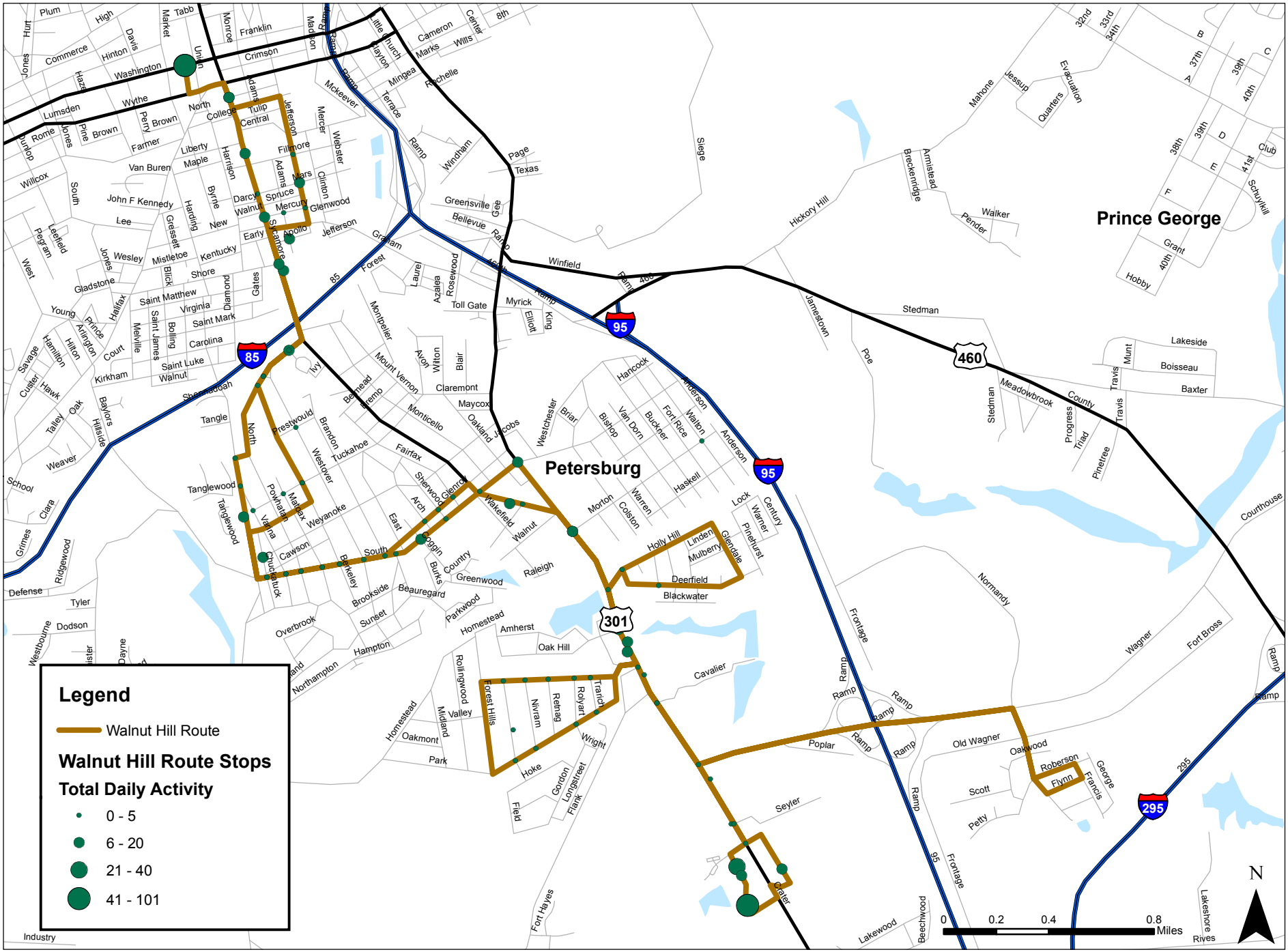
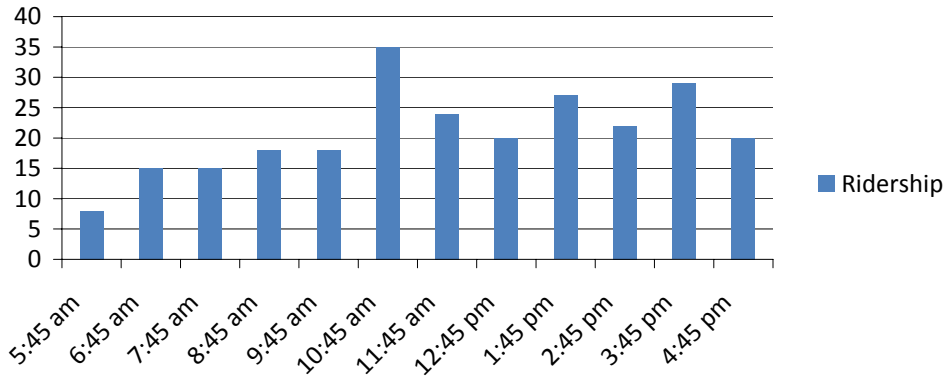


Figure 3-17:
Walnut Hill Weekday Ridership by Time of Day



During the boarding and alighting counts, the South Crater Road route was quite a bit busier than the Walnut Hill route, recording 321 passenger trips on Thursday and 219 passenger trips on Saturday. Productivity on the route was 25.7 passenger trips per hour on Thursday and 17.5 passenger trips per hour on Saturday.

The busiest stops along the route are the downtown transfer stop, Crater Square, Crater/Morton, Ukrops, and Wal-Mart. Figure 3-18 provides the bus stop activity for the route. This route duplicates some of the neighborhoods that are also served by the Walnut Hill route.

Figure 3-19 provides the ridership by time of day. These data show that the busiest run was at 2:15 p.m., followed by 10:15 a.m. and 11:15 a.m.

There was a comment from the on-board survey that requested that the buses wait on Saturdays at 6:15 p.m., an extra five minutes to allow the riders from S. Crater Road to access the other routes.

Southpark Mall

In FY 2009 there were 47,648 passenger trips provided by the Southpark Mall route. The route had a lower than average productivity (11.7 passenger trips per hour) and a higher than average cost per trip ($4.38). This route actually has very good performance, considering that it actually operates an average of 25 minutes out of every hour. The current schedule has the route leaving downtown, heading to the mall and returning. The trip is on an hour headway, but only takes about 25 minutes to perform (though this can change due to traffic conditions on I-95 and throughout the mall area).

During the boarding/alighting counts, the route provided 219 passenger trips, both on Thursday and on Saturday. The productivity was 16.8 passenger trips per hour on Thursday and 17.2 passenger trips per hour on Saturday. Of the 219 weekday boardings, 89 occurred in the City of Colonial Heights. As Figure 3-20 shows, there are very few stops along the route. The high activity stops include downtown, the first mall-area stop along Southpark Road, Wal-Mart, and two of the stops around the Southpark Mall Road.

Ridership is higher in the afternoon, with the last run of the day recording the highest number of passenger trips (25). Ridership by time of day is shown in Figure 3-21.

The extra time in this schedule will be addressed in the development of service alternatives. This time could be used on a route, rather than sitting downtown.

Figure 3-18: South Crater Route Daily Bus Stop Activity

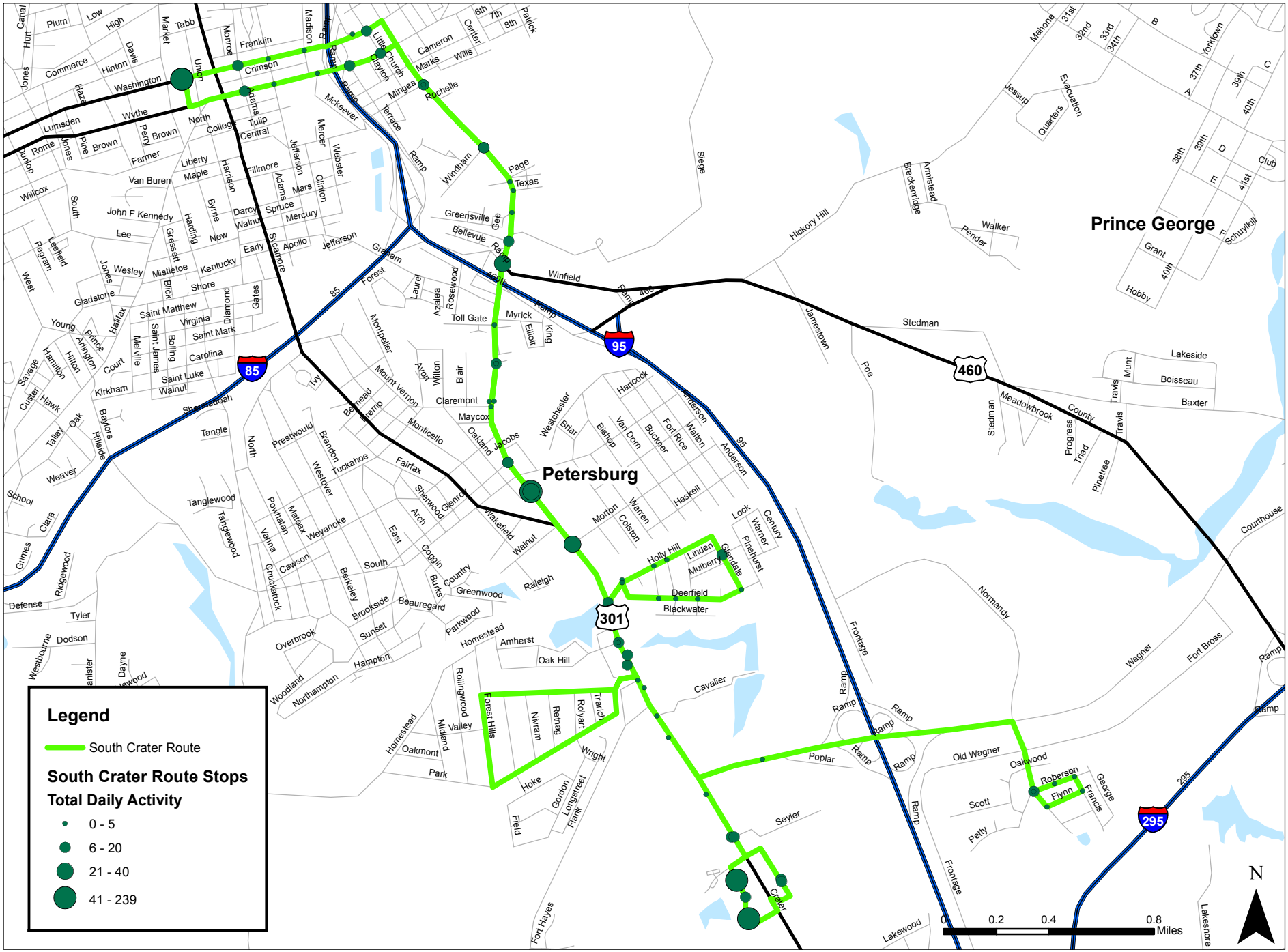


Figure 3-19:
South Crater Road Weekday Ridership by Time of Day

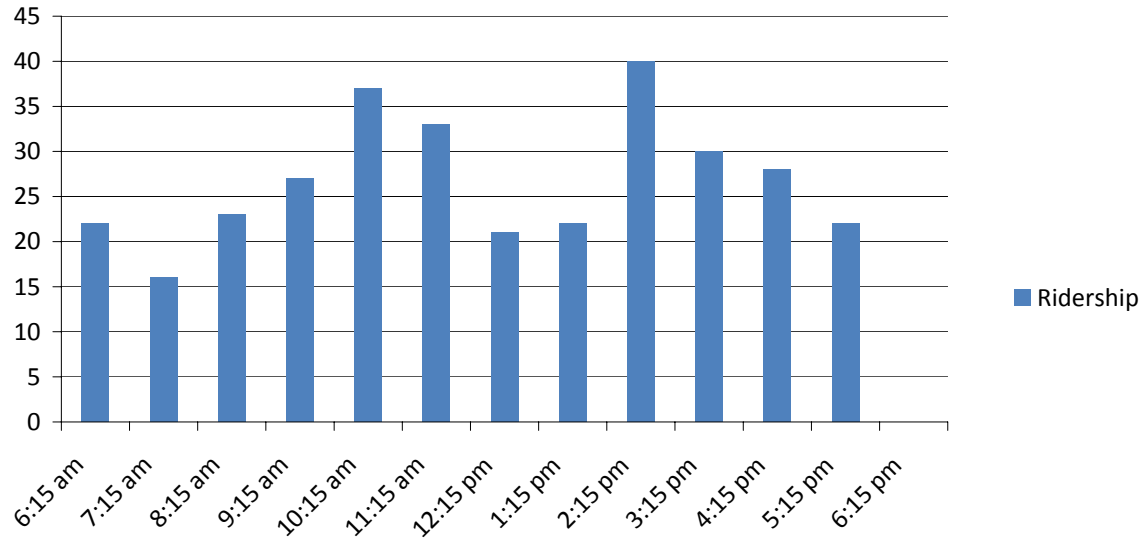


Figure 3-20: Southpark Mall Route Daily Bus Stop Activity

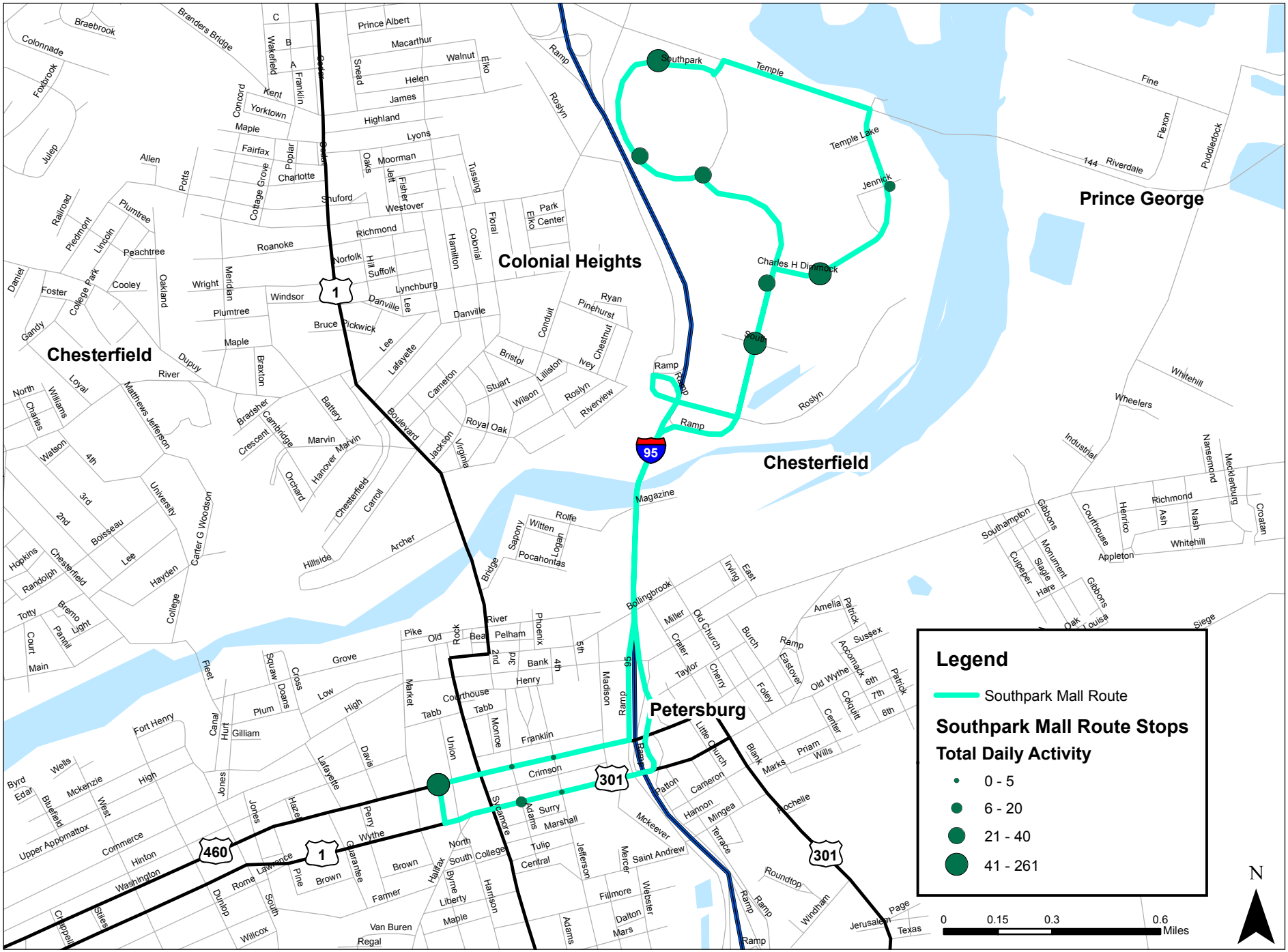
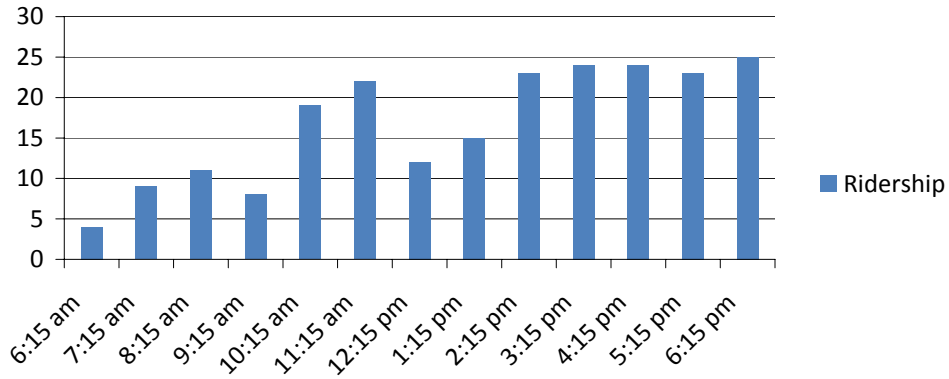


Figure 3-21: Southpark Mall Weekday Ridership by Time of Day



Comments concerning the Southpark Mall bus requested additional service, stops closer to the mall (i.e., not across the parking lot), and a suggestion that "If the Southpark Mall bus was to go down the Boulevard, you will make more money."

Overall Ridership by Jurisdiction

The weekday boardings from the boarding/alighting surveys were analyzed to determine ridership by jurisdiction. On the day of the surveys, 87% of the boardings were within the City of Petersburg, 6% occurred within Chesterfield County, and 4% occurred in within the City of Colonial Heights. The full results for this analysis are provided in Table 3-5. These data are consistent with the survey question that asked respondents to indicate their residential jurisdiction (next section).

Table 3-5 : Weekday Boardings by Jurisdication

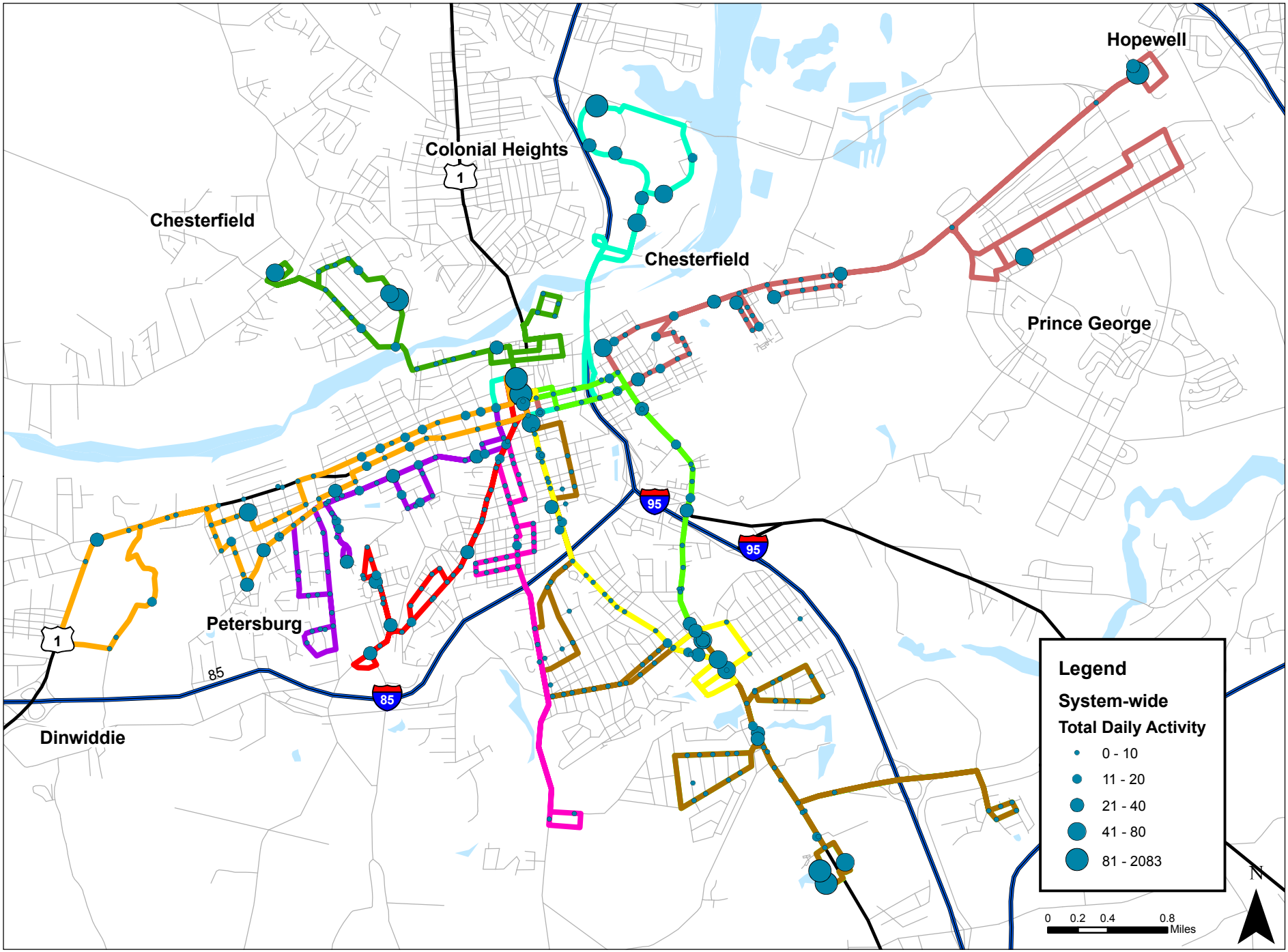
Jurisdiction	Number	Percent
City of Petersburg	1,931	87%
Chesterfield County	125	6%
City of Colonial Heights	89	4%
Prince George County	37	2%
Fort Lee	25	1%
City of Hopewell	11	0%
Dinwiddie County	5	0%
TOTAL	**2,223**	

Figure 3-22 provides a graphic representation of the total activity by stop for the two-day boarding and alighting counts. As the map indicates, the major activity centers include the transfer center, several shopping centers in the service area (both Wal-Marts, the Walnut Hill Shopping area, the Crossing), and VSU.

On-Board Rider Survey

An important task for the Tri-Cities TDP is to learn more information about the current public transportation trip patterns, characteristics of the riders, satisfaction with the service, and suggestions for improvement. In order to collect these data, an on-board rider survey was conducted. The surveys were administered on the same days as the boarding/alighting passenger counts (October 8 -10, 2009). Temporary employees rode the buses and asked passengers to complete the two-page survey during their bus trips. Participants were instructed to complete the survey just one time. The survey results are provided below.

Figure 3-22: PAT System-wide Daily Bus Stop Activity



Number of Surveys and Transfers

A total of 488 passenger surveys were received. The one-day ridership on Thursday was 2,233 passenger trips. Assuming each passenger took two trips, the pool of transit riders was about 1,115 people. Using these numbers, we can be 95% confident (+-4%) that the information collected is representative of the PAT bus riders.

Of the ten routes, the most surveys were collected on the Washington Street/Central State route, followed by the Blandford/Hopewell/Fort Lee route, the Lee Avenue route, and the South Crater Road route. Passengers were asked to indicate whether or not they had to transfer routes to complete their trips. The overall transfer rate was 66%, with the highest transfer rate recorded by riders of the Virginia Avenue route (83%), and the lowest transfer rate recorded by riders of the Blandford/Hopewell/Fort Lee route (53%). These data are shown in Table 3-6.

Table 3-6: Number of Surveys and Transfers

Route	Number of Surveys	Percent of Total	Number of Reporting at Least 1 Transfer	Percent Transfer
Washington St/Central State	87	18%	65	75%
Blandford/Hopewell/Fort Lee	77	16%	41	53%
Lee Avenue	70	14%	50	71%
Crater Road	66	14%	36	55%
Walnut Hill	54	11%	29	54%
Halifax Street	36	7%	29	81%
Ettrick	36	7%	24	67%
Virginia Avenue	30	6%	25	83%
Southpark Mall	18	4%	13	72%
Plaza	14	3%	8	57%
Totals	488		320	66%

Access to Transit

As shown in Table 3-7, the majority of the riders walked to and from the bus stops. Some riders were dropped off/picked up by others, and a very few either accessed the system by taxi, car, or bicycle.

Table 3-7: Access to Transit Stop

Mode to Starting Place	Number
Walked	433
Dropped off by someone	25
Other	20
Bicycled	5
Drove car and parked	1

Other:

Bus	18
GRTC	1
Taxi	1

Mode to Ending Place	Number
Walked	394
Other	28
Picked up by someone	26
Drove car and parked	9
Bicycled	2

Other:

Bus	9
GRTC	4
Taxi	3

Trip Purposes

Forty-five percent of the survey participants use PAT to get to work. Twenty-two percent use PAT for shopping trips, 15% use PAT for social and recreation trips, and 12% use PAT for school trips. These data are shown in Table 3-8.

Table 3-8: Trip Purposes

Trip Purposes	Number	Percent Total
Work	220	45%
Shopping	105	22%
Social/Recreation	75	15%
School	59	12%
Other	42	9%
Medical	39	8%
Government Service Agency	20	4%
Total Trip Purposes	560	
Total Surveys	488	

Note: Participants could check more than one.

Residency of Riders

Eighty-six percent of the riders are residents of the City of Petersburg, followed by Virginia State residential students (5%), Chesterfield County (3%), Dinwiddie County (2%), the City of Hopewell (2%), and Prince George County (1%). Table 3-9 shows these data.

Satisfaction with PAT Services

Riders were given the opportunity to rate a number of the characteristics of the bus system on a scale of 1 to 4, with 1 indicating "very satisfied" and 4 indicating "very unsatisfied." The riders are most satisfied with the cost of the bus fare, the driver courtesy, and the safety and security of the system. The riders were least satisfied with the hours of service, the days of service, and the frequency of service. These scores were tallied in Table 3-10.

Table 3-9: Residency of Riders

Jurisdiction	Number	Percent
City of Petersburg	415	86%
Chesterfield County	16	3%
City of Colonial Heights	3	1%
Dinwiddie County	9	2%
Fort Lee	1	0%
City of Hopewell	9	2%
Prince George County	4	1%
VSU Residential Student	23	5%
Other	3	1%
Richmond	2	
Nottoway County	1	
Total Responses	483	

Table 3-10: Satisfaction with PAT Services

	Very Satisfied 1	Satisfied 2	Un-Satisfied 3	Very Un-Satisfied 4	Composite Score
Cost of bus fare	215	197	11	5	1.55
Driver courtesy	216	178	19	9	1.58
Safety and security	180	217	13	9	1.64
Usefulness of PAT website	118	21	27	14	1.65
Cleanliness of the buses	178	217	22	6	1.66
On-time performance	204	197	28	16	1.68
Availability of information	166	213	28	12	1.73
Convenience of bus stop locations	170	188	53	16	1.80
Telephone customer service	136	218	25	17	1.81
Convenience of bus routes	169	193	50	20	1.82
Frequency of service	144	189	50	29	1.91
Days of service	155	174	60	35	1.94
Hours of service	125	149	92	53	2.17

Rider Demographics

Ninety percent of PAT riders are African American and 61% are female. Sixty-three percent of the riders do not have a driver's license and 58% live in households with no vehicles. The most frequently occurring age category was 26-55 years old (54%), followed by 18-25 years old (25%). There were few riders aged 65 or older (5%). The largest number of respondents indicated that they are employed full-time (202 people, or 41%), followed by unemployed (88 people, 18%), employed part-time (79 people, or 16%), and full-time students (59 people, 12%). Forty-six percent of the riders reported household incomes of $14,999 or less. Another 33% indicated a household income of between $15,000 and $29,999. Table 3-11 provides the demographic data collected via the on-board rider survey.

Desired Improvements

One of the questions on the survey asked respondents to indicate their top three choices with regard to service improvements or geographic expansions. The top five improvements listed were: 1) Longer hours of service; 2) Service to Hopewell/Cavalier Square; 3) Service to Colonial Heights/Boulevard; 4) More frequent service; and 5) Sunday service. The full list of requested improvements is provided in Table 3-12.

General Comments

The general comments echoed the responses provided in other portions of the survey, including the need for longer hours, more frequent service, and a reversal of the route combinations implemented in July. There were also a number of requests for bicycle racks on the vehicles and a few requests for seat belts. Several comments expressed appreciation for the system. The full comments are provided in Appendix A**.**

Title VI Report

PAT's most recent Title VI report was submitted to the FTA on March 20, 2007. At that time there were no active lawsuits or complaints naming PAT of any alleged discrimination on the basis of race, color, or national origin with respect to service or other transit benefits. This report is attached as Appendix B.

FTA Triennial Review

PAT's most recent FTA Triennial Review was conducted in 2007, with the desk review on January 30, 2007 and the site visit on May 1-2, 2007. Deficiencies were found in eight of the 23 areas, including legal; technical; satisfactory continuing control; disadvantaged business enterprise; half fare; ADA; safety and security; and drug and

Table 3-11: Demographics

Race	Number	Percent
African American	414	90%
Caucasian	14	3%
Hispanic/Latino	10	2%
Other	10	2%
Asian American	7	2%
Native American	4	1%
Total Responses	**459**	

Sex	Number	Percent
Female	273	61%
Male	175	39%
Total Responses	**448**	

Do you have a driver's license?	Number	Percent
Yes	93	37%
No	161	63%
Total Responses	**254**	

Number of Household Vehicles	Number	Percent
None	244	58%
One	111	26%
Two	43	10%
Three	17	4%
Four or more	8	2%
Total Responses	**423**	

Table 3-11 (continued)

Age of Riders	Number	Percent
Under 12 years old	5	1%
12-17 years old	20	4%
18-25 years old	116	25%
26-55 years old	246	54%
56-64 years old	47	10%
65 years old or older	22	5%
Total Responses	**456**	

Employment Status	Number	Percent
Employed full-time	202	41%
Unemployed	88	18%
Employed part-time	79	16%
Student, full-time	59	12%
Retired	34	7%
Student, part-time	20	4%
Other	18	4%
Homemaker	8	2%
Total Responses	508	
Total Surveys	488	

Note: Participants could check more than one.

Annual Household Income	Number	Percent
$14,999 or less	182	46%
$15,000 to $29,999	129	33%
$30,000 to $44,999	48	12%
$45,000 to $59,999	23	6%
$60,000 to $74,000	7	2%
$75,000 or higher	4	1%
Total Responses	393	

Table 3-12
Desired Service Improvements/Expansions

Improvement	Number of Requests
Longer hours of service	73
Hopewell/Cavalier Square	54
Colonial Heights/Boulevard	42
Improved frequency	31
Sunday service	24
Hospital	17
Chester/Chesterfield	12
Dinwiddie	12
Richmond	11
Better on-time performance	9
Prince George	8
Fort Lee	7
Lower fares/no fares	7
Central State	6
Southpark	6
Crater Road	5
Ettrick	5
More routes	5
Improved customer service/information	4
Bus stop improvements	4
Washington Street	4
Richard Bland College	3
Probation/SVTC	3
Allow cell phones	3
Halifax Street	3
Ramps	3
Northern VA/Potomac Mills	3
Walnut Hill	3
Cleanliness	2
New buses	2
Kings Dominion	2
Plaza	2
Closer to mall	2
24 hour automatic customer service	1
Bike racks	1
Better website	1
AC	1

Table 3-12
Desired Service Improvements/Expansions

Improvement	Number of Requests
Boln Road	1
Change Blandford back	1
Military discount	1
College discount	1
Carson	1
Bring blonde Ford bus back	1
County Drive	1
Dewitt	1
Flank Road	1
Farmer Street	1
John Tyler	1
Matoka	1
Do not go through Fort Lee	1
River Road	1
Rome Street	1
Route 301	1
Williamsburg	1
Petersburg High	1
Shenandoah Valley	1
Safety and security	1
Seat belts	1
Bus passes	1
Buses need numbers	1

alcohol program. Exhibit 3-1 provides the summary of findings and corrective actions that were included in the Triennial Report. In August of 2007, PAT responded to the findings. The full report and the City's response are provided in Appendix C.

PARATRANSIT ANALYSIS

As part of the Tri-Cities Transit Development Plan (TDP), this paratransit analysis is being conducted to assist the City in developing a more cost effective approach to providing Americans with Disabilities Act (ADA) paratransit service. This analysis looks at several facets of the program to see where further efficiencies could be achieved through either policy or operational changes.

Petersburg Area Transit (PAT) provides paratransit service to complement the fixed-route system, as required by the ADA. ADA complementary paratransit service is provided for senior citizens and people with disabilities who live within the City limits or within ¾ mile of a fixed-route. Door-to-door service is provided.

Consistent with the ADA, complementary paratransit service is available during the same hours that the fixed-route services are operated, which is 6:00 a.m. to 6:30 p.m., Monday through Thursday; 6:00 a.m. to 7:30 p.m. on Friday, and 7:00 a.m. to 7:30 p.m. on Saturday. Reservations for next day service can be left on PAT's answering machine, with confirmation made the same day or the next morning. Same day service is provided, if the schedule permits. Reservations are taken up to 14 days in advance of the requested trip. The ADA paratransit fare is $1.00, which is twice the fixed-route fare (50 cents).

Service Area

The ADA paratransit service area includes the City of Petersburg and areas within ¾ mile of the Ettrick bus route. In addition, as a courtesy to long-time riders, trips to medical facilities located within the City of Colonial Heights and Dunlap Farms are permitted. ADA paratransit is also provided along the Route 36 corridor to the City of Hopewell (Crossings Shopping Center), to complement the Fort Lee/Hopewell fixed-route; and to Colonial Heights along Charles Dimmock Parkway and in Dinwiddie County adjacent to the Westgate Shopping Areas.

Figure 3-23 provides a map of the legally-required service area (i.e., ¾ mile of the fixed routes), along with the origin addresses of the currently registered ADA riders. As the map indicates, there are only a few riders that fall outside of the legally-required ADA service area, as most of the City is within ¾ mile of the fixed routes. From this map it appears that there are not any ADA patrons who live in Colonial Heights,

Exhibit 3-1

V. SUMMARY OF FINDINGS AND CORRECTIVE ACTIONS

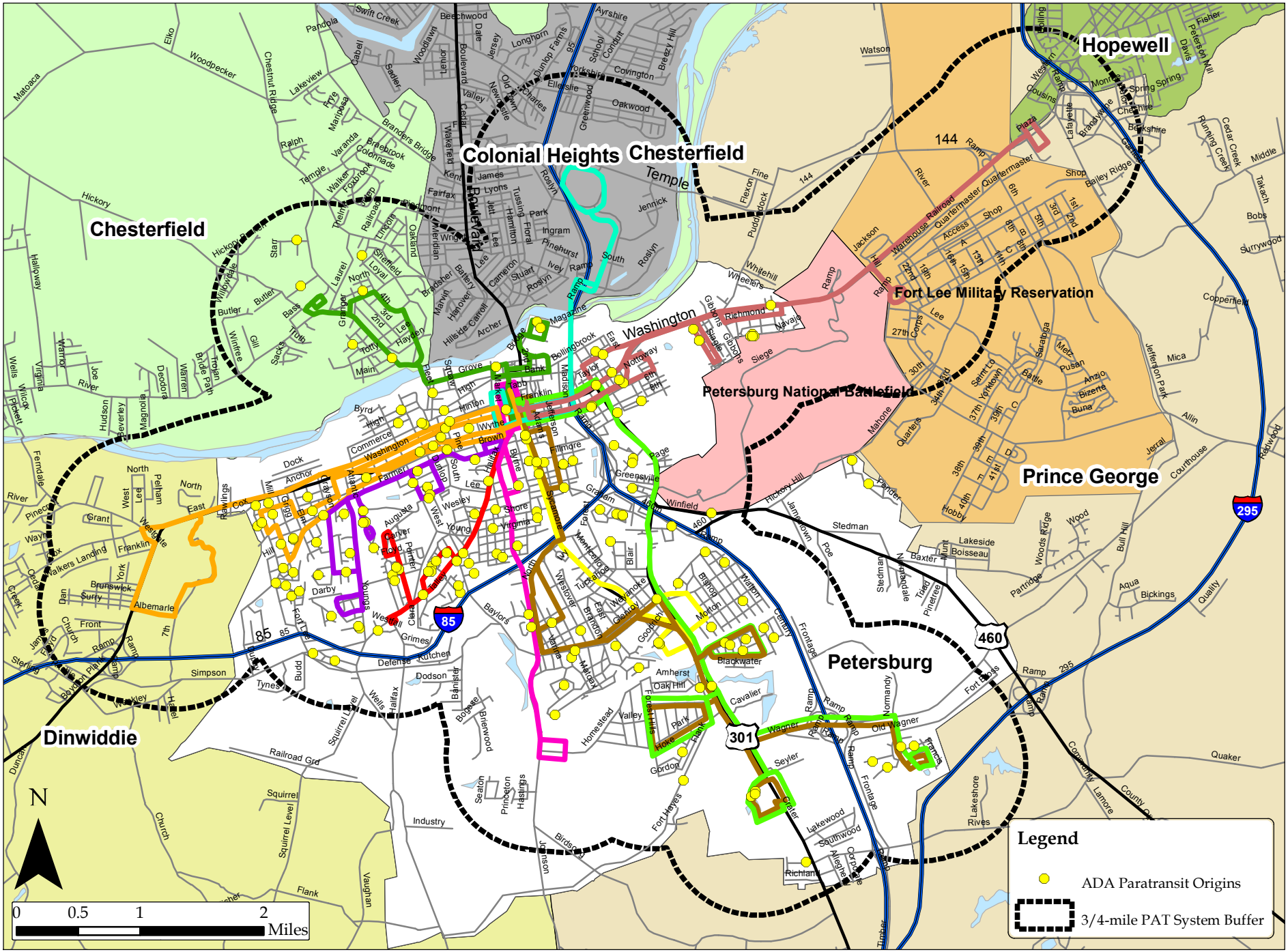
Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
1. Legal	D	06: No/late submission	Submit to the FTA Region III Office documentation that the city manager and attorney has executed the FY07 Certifications and Assurances and also completed the "pinning" process in TEAM.	July 2, 2007	May 17, 2007
2. Financial	ND				
3. Technical	D	01: Inadequate grant administration/procedures	Submit to the FTA Region III Office procedures for monitoring the various FTA program requirements to ensure that program policies and updates are implemented and submitted timely	August 30, 2007	
4. Satisfactory Continuing Control	D	03: Inadequate equipment records	Submit to the FTA Region III Office documentation to evidence PAT has updated its records to include all of the required attributes for its federally funded assets.	August 30, 2007	
5. Maintenance	ND				
6. Procurement	ND				
7. Disadvantaged Business Enterprise	D	07: Uniform reports not submitted semi-annually	Submit to the FTA Region III CRO the Uniform Report for DBE Awards or Commitments and Payments.	June 15, 2007	
8. Buy America	ND				
9. Suspension/ Debarment	ND				
10. Lobbying	ND				
11. Planning/POP	ND				
12. Title VI	ND				
13. Public Comment for Fare and Service Changes	ND				
14. Half Fare	D	02: Fares not extended to all required services	Submit to the FTA Region III Office documentation that PAT has revised its fare information to extend the half fare program to Medicare Card holders.	August 30, 2007	
15. ADA	D	04: ADA Complementary Paratransit service deficiencies	Submit to the FTA Region III Civil Rights Officer documentation that its complementary paratransit service is offered during the hours of its fixed route service.	August 30, 2007	
16. Charter Bus	ND				
17. School Bus	ND				
18. National Transit Database	ND				

Exhibit 3-1 (continued)

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
19. Safety and Security	D	07: One percent security requirement not met	Submit to the FTA Region III Office a plan for meeting the requirement to utilize one percent of PAT's Urbanized Area Formula Grant funds for transit security and report on the implementation of this plan.	July 2, 2007	
	AC	21: Drills/ assessments of potential emergency events not performed	PAT is encouraged to implement the advisory comment detailed in the deficiency column.	NA	
	AC	27: Security information not provided to passengers		NA	
	AC	34: Protocols for threat advisory levels lacking		NA	
20. Drug-Free Workplace	ND				
21. Drug and Alcohol Program	D	02: Drug and alcohol policy lacking required elements	Submit to the FTA Region III Office documentation that it has revised its Drug & Alcohol policy to include all required element and that it has obtained governing board approval and re-communicated it to all affected employees.	July 2, 2007	
		09: Drug and/or alcohol program vendors not properly monitored	Submit to the FTA Region III Office documentation that it has begun monitoring its drug and alcohol program vendors, such as the collection site and the MRO, to ensure that they comply with federal requirements.	July 2, 2007	
22. Equal Employment Opportunity	ND				
23. ITS Architecture	ND				

Findings: ND = No Deficiencies; D = Deficient; AC = Advisory Comment; NA = Not Applicable; NR = Not Reviewed

Figure 3-23: PAT System with 3/4-mile Buffer and ADA Paratransit Origins



Hopewell, or on Fort Lee. If the City is specifically requiring that ADA patrons be residents of Petersburg or Ettrick, then this policy is in conflict with the ADA. Under the ADA, people with disabilities who live within ¾ mile of a fixed-route and are unable to use the fixed routes due to their disability, are eligible for ADA paratransit.

Vehicle Fleet and Drivers

The paratransit program is operated using between two and five vehicles on a daily basis. There are two full-time and three part-time paratransit drivers, with either four or five drivers working on a typical weekday, and one or two drivers working on Saturdays.

Eligibility and Trip Scheduling

In order to be certified to use ADA paratransit, patrons must complete a certification form. When PAT receives the form and reviews it, a home visit is made by PAT staff to verify that the person is eligible for ADA paratransit services. Photo identification cards are then issued to paratransit patrons who are residents of the City of Petersburg. Potential ADA riders are offered service while they are in the certification process.

A staff person who reports to the Operations Manager handles the ADA paratransit trip scheduling. When riders call to schedule their trips, the initial trip is placed in the daily log book by the PAT staff person. Return trips are not pre-scheduled, but are provided on a "will-call" basis. Riders are given a 30-minute window, meaning the van may arrive 15 minutes before or after the scheduled time.

Each afternoon the PAT staff person transfers the trips from the log book to the drivers' manifests for the next day. The schedules are manually created.

Historical Data

In FY 2009, PAT provided 10,342 ADA paratransit passenger trips. The total mileage associated with these trips was 62,936, with 27,744 miles reported as revenue miles. These data indicate that the deadhead miles were very high (56%). In FY 2008, ridership and mileage was a little higher, with 10,827 passenger trips provided, 29,985 revenue miles recorded, and 66,640 total miles. Deadhead miles were also high in FY 2008 (55%). The internal paratransit data kept by PAT does not track revenue hours, though they are calculated for the National Transit Database (NTD).

Data gathered from the NTD for FY 2005 through FY 2007 indicate lower ridership, but higher revenue miles. Revenue hours reported to the NTD were consistent for these years, at about 4,700 annual revenue hours. The historical data are provided in Table 3-13.

Table 3-13: ADA Paratransit Vehicle Productivity

FY 2009

Vehicle Number	Passenger Trips	Revenue Miles	Deadhead Miles	Total Miles	Percent Deadhead
131-735L	2,584	5,761	6,124	11,885	52%
131-740	1,620	4,694	5,174	9,868	52%
131-741L	1,408	3,500	4,061	7,561	54%
131-742L	1,366	3,335	4,719	8,054	59%
131-706L	1,393	3,750	5,889	9,639	61%
112-734L	1,971	6,704	9,225	15,929	58%
	10,342	27,744	35,192	62,936	56%

FY 2008

Vehicle Number	Passenger Trips	Revenue Miles	Deadhead Miles	Total Miles	Percent Deadhead	NTD Revenue Hours
131-735L	2,037	4,780	4,936	9,716	51%	
131-740	1,729	4,913	5,621	10,534	53%	
131-741L	1,684	4,503	6,238	10,741	58%	
131-742L	2,028	4,786	5,620	10,406	54%	
131-706L	1,299	3,912	5,441	9,353	58%	
112-734L	2,050	7,091	8,799	15,890	55%	
	10,827	29,985	36,655	66,640	55%	4,785
				MPH		
FY 2007	8,150	31,789		6.78		4,689
FY 2006	8,968	44,072		9.35		4,716
FY 2005	8,003	44,484		9.43		4,719

Peer Data

Of the peers examined for the fixed-route analysis, three of them provide ADA paratransit service (one provides deviated fixed routes, and the other is in a metropolitan area with a regional ADA paratransit provider). Table 3-14 provides the ADA paratransit peer data from the NTD. As these data show, Petersburg's program has the lowest number of revenue hours and revenue miles, but uses more vehicles than the mean. PAT's annual ridership is about half of the mean. PAT's cost per trip and cost per hour were also below the mean. PAT's productivity was 2.3 trips per revenue hour in FY 2008, which was higher than two of the peer programs.

In terms of resources devoted to ADA paratransit, the peer data shows that PAT spends less on ADA paratransit as a percentage of the total operating expenses than the peer group (8% versus a mean of 13.2%). These peer data suggests that PAT's ADA program operates in a cost-effective manner.

Analysis of Recent Data

In order to get a better understanding of how the program operates, two weeks' worth of daily service logs and daily passenger record sheets were examined. These data include information concerning what vehicles were used, how many drivers worked, the number of trips, and the revenue/non-revenue miles. Hours are not recorded on these data-recording sheets.

Table 3-15 shows the data gathered from the two-week sample. For the 10-day period, an average of 3.3 vehicles were used on a daily basis, and 27 daily passenger trips were provided. Similar to the historic data, the deadhead mileage was high at 53%.

Potential ADA Paratransit Strategies

This analysis has revealed a few areas where PAT could potentially make adjustments to improve the productivity of the program. These strategies are described below.

1. Look at ways to improve trip scheduling, starting by recording the actual pick-up and drop-off times on the drivers' logs. It is difficult to analyze the performance of the scheduling function without these data. The large percentage of deadhead miles suggests that the drivers leave the garage, provide a passenger trip or two, and then return to the garage quite frequently. This suggests that the schedules are loose. Another indication that the schedules could be more efficient is the number of vehicles that are used. The two-week data show that 8.1 passenger trips were provided per

Table 3-14: ADA Paratransit -- Peer Data, FY 2008

Transit Program	Vehicles in Maximum Service	Service Area Size (sq.mi)	Service Area Population	Annual Revenue Hours	Annual Revenue Miles	Annual Unlinked Trips	Operating Expenses	Fare Revenue	Farebox Recovery
City of Harrisonburg, VA	6	17	45,261	10,434	94,577	22,691	$ 546,013	$ 70,751	13%
City of High Point, NC	3	52	94,973	11,221	163,008	39,244	$ 449,411	$ 80,033	18%
City of Monroe, LA	2	31	55,000	5,517	60,149	10,538	$ 298,918	$ 13,153	4%
City of Petersburg	5	7	31,300	4,785	30,182	10,849	$ 219,402	$ 7,250	3%
Mean	4.0	26.8	56,634	7,989	86,979	20,831	$ 378,436	$ 42,797	10%

Transit Program	Trips/ Hour	Cost/ Trip	Trips/ Capita	Cost/ Hour	Percent Total Operating Budget
City of Harrisonburg, VA	2.2	$ 24.06	0.50	$ 52.33	18.4%
City of High Point, NC	3.5	$ 11.45	0.41	$ 40.05	18.3%
City of Monroe, LA	1.9	$ 28.37	0.19	$ 54.18	8.3%
City of Petersburg	2.3	$ 20.22	0.35	$ 45.85	8.0%
Mean	2.46	$ 21.03	0.36	$ 48.10	13.2%

Source: National Transit Database.

Table 3-15: 10-Day Analysis of Daily Paratransit Program

	Number of Vehicles	Number of Drivers	Number of Passenger Trips	Revenue Miles	Percent Revenue	Deadhead Miles	Percent Deadhead	Total Miles
Day 1	2	4	28	69	46%	80	54%	149
Day 2	3	4	26	99	63%	58	37%	157
Day 3	4	4	26	90	40%	136	60%	226
Day 4	3	4	20	69	45%	84	55%	153
Day 5 (snow)				*Did not use data*				
Day 6	5	5	29	94	43%	123	57%	217
Day 7	4	4	31	91	53%	82	47%	173
Day 8	2	4	22	49	44%	62	56%	111
Day 9	4	4	31	93	43%	124	57%	217
Day 10	3	4	30	98	53%	86	47%	184
10-day Total	30	37	243	752		835		1,587
Mean Daily	3.3	4.1	27	84	47%	93	53%	176

Mean Passengers Per Vehicle: 8.1

vehicle per day. This is low, suggesting that the vehicles are not being fully utilized. The actual pick-up and drop-off times would provide the information needed to make improvements to the scheduling function.

2. Record the return trip on the drivers' logs. Because the system operates on a will-call basis for the return trip, the return trip is recorded, but there are no details of the timing of the trip. Again, without this documentation, it is hard to make recommendations as to ways to improve the scheduling function.

3. Consider negotiating the passengers' pick-up times to produce more shared-riding. Under the ADA, transit agencies can negotiate with passengers to offer the ride up to one-hour on either side of the requested ride time (with some caveats -- transit agencies can't schedule trips in a manner that makes people miss appointments or be late for work.)

4. Consider implementing functional eligibility for senior citizens rather than the blanket eligibility that is currently offered. All senior citizens are not functionally disabled and some could use the fixed-route service instead. Offering ADA paratransit service to all senior citizens is beyond what is required under the ADA.

5. Limit the use of will-calls except for some medical trips where the timing of the return trip is difficult to estimate. This recommendation involves scheduling the return trip when the trip is booked, rather than waiting for the person to call and then picking them up on demand. This practice enables better planning of the afternoon trips, allowing more sharing of trips.

6. Consider discontinuing same day service, which is convenient for the riders, but is not required under the ADA.

In addition, PAT does need to ensure that it is complying with the ADA with regard to serving ADA riders who live within ¾ mile of a fixed route, not just City residents and Ettrick residents.

TRANSIT NEEDS ANALYSIS

The focus of this transit needs assessment is to analyze quantitative land use and population data, along with qualitative data provided by area stakeholders and the public, to develop a solid understanding of the travel needs of the diverse group of current and potential riders. This needs assessment incorporates information gathered from recent planning efforts, the U.S. Census, interviews with local stakeholders, and a public opinion survey.

Review of Recent Plans

Richmond/Petersburg Coordinated Human Service Mobility Plan

In response to the coordinated planning requirements of the SAFETEA-LU legislation, the Virginia Department of Rail and Public Transportation sponsored the development of a Coordinated Human Service Mobility Plan. The coordinated plan was designed to guide funding decisions for three specific grant programs: Section 5316-Job Access and Reverse Commute, Section 5317- New Freedom, and Section 5310-Elderly Individuals and Individuals with Disabilities.

An important part of the coordinated planning process was to conduct an assessment of the transportation needs for individuals with disabilities, older adults, and people with low incomes. The following unmet transit needs and issues were identified in the Coordinated Plan:[1]

- Communication
  - Increased marketing of existing transportation options and how to use them
  - Improved communication between providers and customers
  - Greater awareness by providers, decision-makers, and other to mobility issues
  - Market environmental benefits of transit as incentives for choice riders
  - Ensure that traffic signals have accessibility devices

- Coordination
  - Improved coordination between transportation providers
  - Customers have to rely on different providers for different types of trips
  - Limited number of volunteer drivers
  - Need to coordinate to expand access to accessible vehicles
  - Coordinate a one-stop location for riders to get information on available services and to request services
  - More regional approach in marketing and coordination of services
  - Bring non-profits and churches with available vans into coordination efforts.

- Cost
  - Additional funding to provide specialized transportation services, especially during start-up phase

[1] Richmond/Petersburg Metropolitan Planning Areas Coordinated Human Service Mobility Plan, April 2008, prepared by Cambridge Systematics and KFH Group for the Virginia Department of Rail and Public Transportation.

  - Diminishing affordability for customers
  - Transportation for non-Medicaid funded trips
  - Assistance while waiting to qualify for services
  - Additional funding for public transportation besides the local government
  - Increased cost efficiency by transitioning more expensive paratransit services to fixed routes (where feasible)
  - Engage road engineers to include more disability and senior-friendly facilities in initial development proposals

- Service
  - Fixed-route service to employment areas, especially growing suburban locations
  - Weekend service throughout region
  - Access to evening and night jobs
  - Greater mid-day service
  - Door-to-door services, door-through-door services, and other assistance to enable mobility
  - Shorter and more frequent trips
  - Serve non-profit organizations that provide public services that are not along current routes

- Policy/Guidelines
  - Eligibility, scheduling, and other areas vary between providers
  - Greater flexibility to allow for additional family members
  - Greater flexibility for people who are borderline eligible for services
  - Need to establish quality standards for transit providers, including guidelines for equipment, drug testing, and defensive driving classes

- Built Environment
  - Greater access to stops; need sidewalks to increase access to public transportation
  - Additional passenger waiting shelters
  - Some apartment complexes and retirement communities do not accommodate buses
  - Landscaping along sidewalks needs to be more sensitive to disabled persons and seniors
  - Curb cuts need to be available on both sides of the street
  - Increase accessibility at major destinations including hospitals and shopping centers
  - Make new developments more accessible

Fort Lee Growth Management Plan

Fort Lee is experiencing a significant expansion as a result of the military's Base Realignment and Closure process (BRAC). Chapter Seven of the Fort Lee Growth Management Plan addresses the transportation impacts of the BRAC expansion.[2] The Plan estimates significant increases in traffic volumes in the area surrounding the Fort and includes recommendations for a number of specific roadway improvements. The Plan also identified the following future transit markets:

1. Trainees from local hotels to Fort Lee.

2. Commuters from off-base to Fort Lee.

3. Commuters from base to off-base (spouses of personnel residing on base seeking off-base employment).

4. Base residents seeking recreational opportunities.

5. Base visitors to the train station, airport, and bus station.

The Plan suggested that a partnership be formed between Petersburg Area Transit and Fort Lee to develop additional service to the base. In addition, the plan suggested that additional vanpooling opportunities through Ridefinders could be pursued.

Discussions with the BRAC coordinator of Fort Lee indicated that a significant segment of the Army transfers to Fort Lee will be temporary trainees housed on base for a period of weeks and months. These trainees will likely not have personal vehicles on base and will need access to additional transit options to access recreational opportunities. A direct service to the Southpark Mall area from Fort Lee has been suggested.

Tri-Cities Area Year 2031 Transportation Plan

The Tri-Cities Area Year 2031 Transportation Plan was completed in June, 2008. The goals and objectives of the Plan were:

1. *" Develop a regional transportation plan which offers alternative travel modes for the safe and efficient movement of people and freight at a reasonable cost.*
   Objectives:

[2] Fort Lee Growth Management Plan, Transportation Impacts, RKG Associates, February 29, 2008.

- *Promote pedestrian and vehicular travel safety.*
- *Reduce travel time and transportation costs.*
- *Assure the future availability of transit service.*
- *Participate in regional and State airport and freight movement studies.*
- *Promote the use of low cost improvements and energy conservation measures to maximize the efficiency of the existing transportation system.*
- *Promote transportation security considerations, especially at military installations located in the transportation study area.*

2. *Assure that transportation improvements are compatible with local comprehensive plans, regional economic development activities, and environmental regulations.*
   - *Encourage the implementation of future transportation improvements which complement current land development patterns and regional economic development activities.*
   - *Promote the reduction of mobile source air emissions.*

3. *Improve the urban transportation planning process by encourage citizen input and intergovernmental cooperation.*
   - *Follow the provisions of adopted public participation process regarding resource agency consultation and stakeholder involvement.*
   - *Maximize local government input into the development of area-wide transportation plans through the maintenance of a continuing transportation planning process."*[3]

The public transportation section of the plan does not currently include major transit expansions, other than the opening of the Petersburg Station. Maintaining current service levels and ensuring the timely replacement of vehicles and equipment are the focus of the public transportation portion of the 2031 Transportation Plan.

Summary information on transit improvements considered with this 2010 TDP update will be incorporated in the 2035 Metropolitan Transportation Plan Update.

Demographic Analysis

The demographic analysis of transit needs focused on quantitative data for potentially transit dependent populations, such as older adults, individuals with disabilities, and persons living below the poverty level. U.S. Census data on such populations were collected, processed, and mapped using GIS technology to determine areas with relatively high potential transit needs. Major origins and destinations that potential transit riders may need to access were also researched and mapped to

[3] Tri-Cities Area Year 2031 Transportation Plan, June 2008, prepared by the staff of the Crater Planning District Commission.

augment our understanding of areas with higher transit needs. Existing transportation services were overlaid on these needs maps to determine the extent to which the current transportation network serves potential transit riders and the places they travel to and from. Combined with input from stakeholders and the public, the analysis of gaps in existing services and the identification of relatively high need areas, including key origins and destinations, will guide the design of new transit services and changes to existing services.

Transit Dependent Populations

The first part of the demographic analysis examined those population segments that are most likely to require alternative mobility options to the personal automobile due to age, disability, income status, or simply because they reside in a household in which there are no available automobiles. The data utilized in this analysis were gathered from Census 2000 data tables, (Summary Files 1 and 3), adjusted based on 2007 ESRI data, and included several segments of the population:

- Youth — Persons between the ages of 12 and 17. These individuals are essentially old enough to make trips without an accompanying adult, but often are not old enough to drive themselves or do not have a car available.

- Elderly – Persons age 60 and above. This group may include those who either choose not to drive any longer, have previously relied on a spouse for mobility, or because of factors associated with age can no longer drive.

- Persons with Disabilities – Persons age 16 and above who have a disability lasting six months or more that makes leaving the home alone for simple trips such as shopping and medical visits difficult for them.

- Poverty Status – This segment includes those individuals living below the poverty level who may not have the economic means to either purchase or maintain a personal vehicle.

- Autoless Households – Number of households without an automobile. One, if not the most, significant factor in determining transit needs is the lack of an available automobile for members of a household to use.

In order to identify the geographic areas that have high relative transit needs, the Census 2000 data on these five populations were gathered and summarized at the block group level. All Census block groups within the Tri-Cities MPO region were ranked by each population category. For example, all block groups were ranked from high to low based on the number of youth in each block group. The block group with the highest number of youth was ranked 1; the block group with the second highest number was

ranked 2; and so on. This process was repeated for all five potentially transit dependent populations listed above. The rankings by each population category were then summed by block group to produce an overall ranking of potential transit need for each block group.

The Census block groups were divided into approximate thirds and classified—relative to each other—as having high, medium, or low potential transit needs. Representing each block group's combined rankings for the five potentially transit dependent populations, the overall ranking was mapped to produce geographical representations of transit needs in the Tri-Cities MPO area. This ranking was generated twice, first based on the density of transit dependent persons and secondly based on the percentage. In addition, the block groups were ranked and mapped separately based on population density, which helps determine the type of transportation service that is feasible for the area, and the number of autoless households, which as mentioned previously is a key factor in determining potential transit need. Each map was overlaid with existing fixed-route public transportation services (PAT) to determine whether identified areas of transit need are served by existing routes and if there are potential gaps in the current transportation system. The analyses of these maps are summarized below.

Ranked Density of Potentially Transit Dependent Populations

In the overall ranking based on the density of transit dependent persons, the block groups were mapped to show areas within the MPO region that have concentrations of transit dependent persons. Areas with higher densities are better candidates for fixed-route transit services. The results of this ranking for the entire study area are presented in Figures 3-24 and 25. Figure 3-24 portrays the entire study area and Figure 3-25 zooms in the more urbanized portion of the region. Areas with relatively high needs based on the density of potentially transit dependent persons are concentrated in the Cities of Colonial Heights, centered around the Boulevard, the entire central portion of the City of Hopewell, and a large northwestern portion of the City of Petersburg. Of these high-need areas, public transit is only offered in the City of Petersburg.

Population Density

General population density in the Tri-Cities MPO area was also mapped to help determine the appropriate level of transit service, such as fixed-route, deviated fixed-route, scheduled, or demand-response, which may not be as obvious based on transit dependency alone. The most accepted guideline is a population density of at least 2,000 persons per square mile to support regular fixed-route transit service. However, if an area has a large transit dependent population, a lower density can sometimes support this type of service as well.

Figure 3-24: Tri-Cities MPO: Ranked Density of Potentially Transit-Dependent Populations, 2007

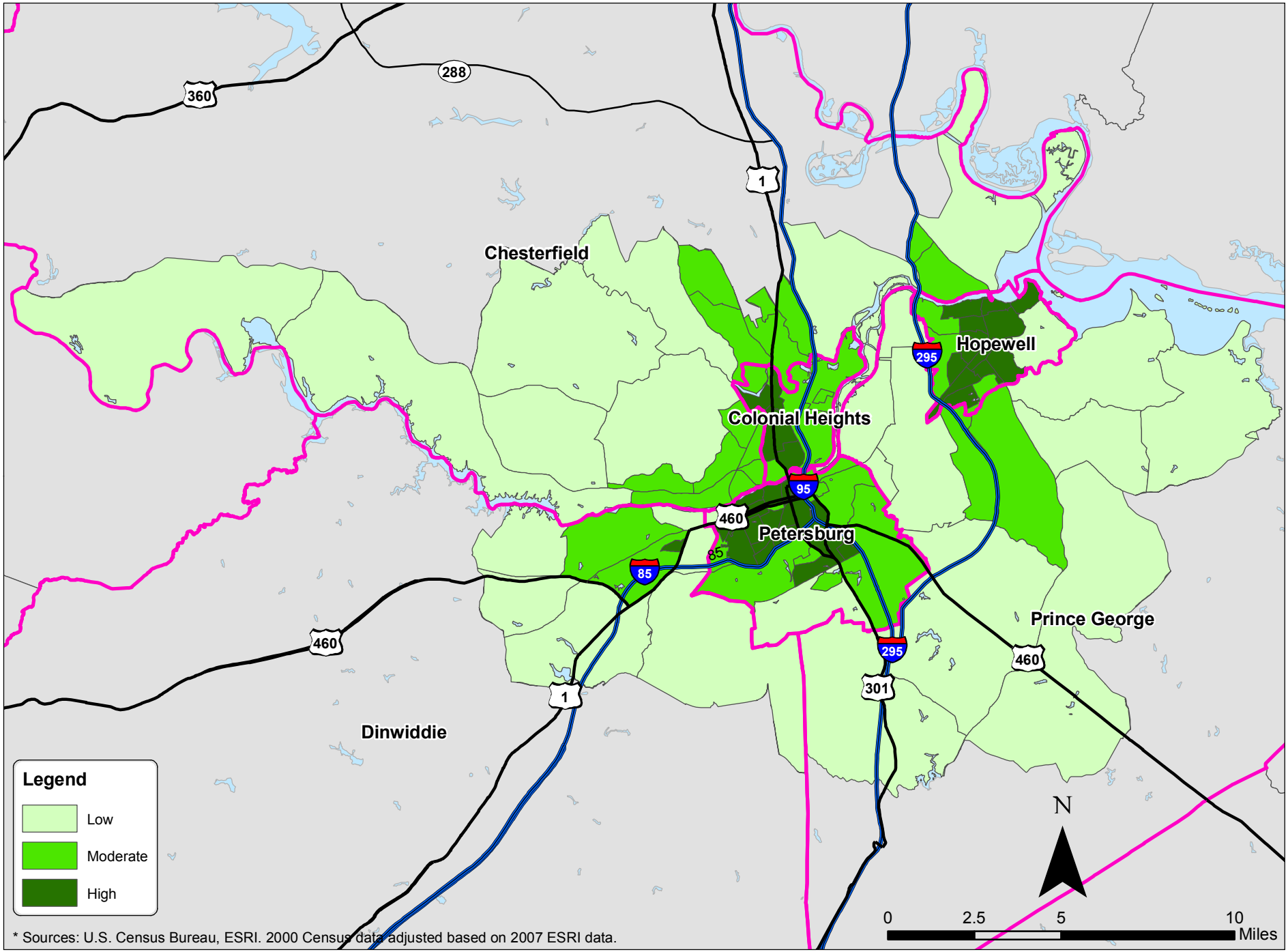


Figure 3-25: Central Tri-Cities MPO: Ranked Density of Potentially Transit-Dependent Populations, 2007

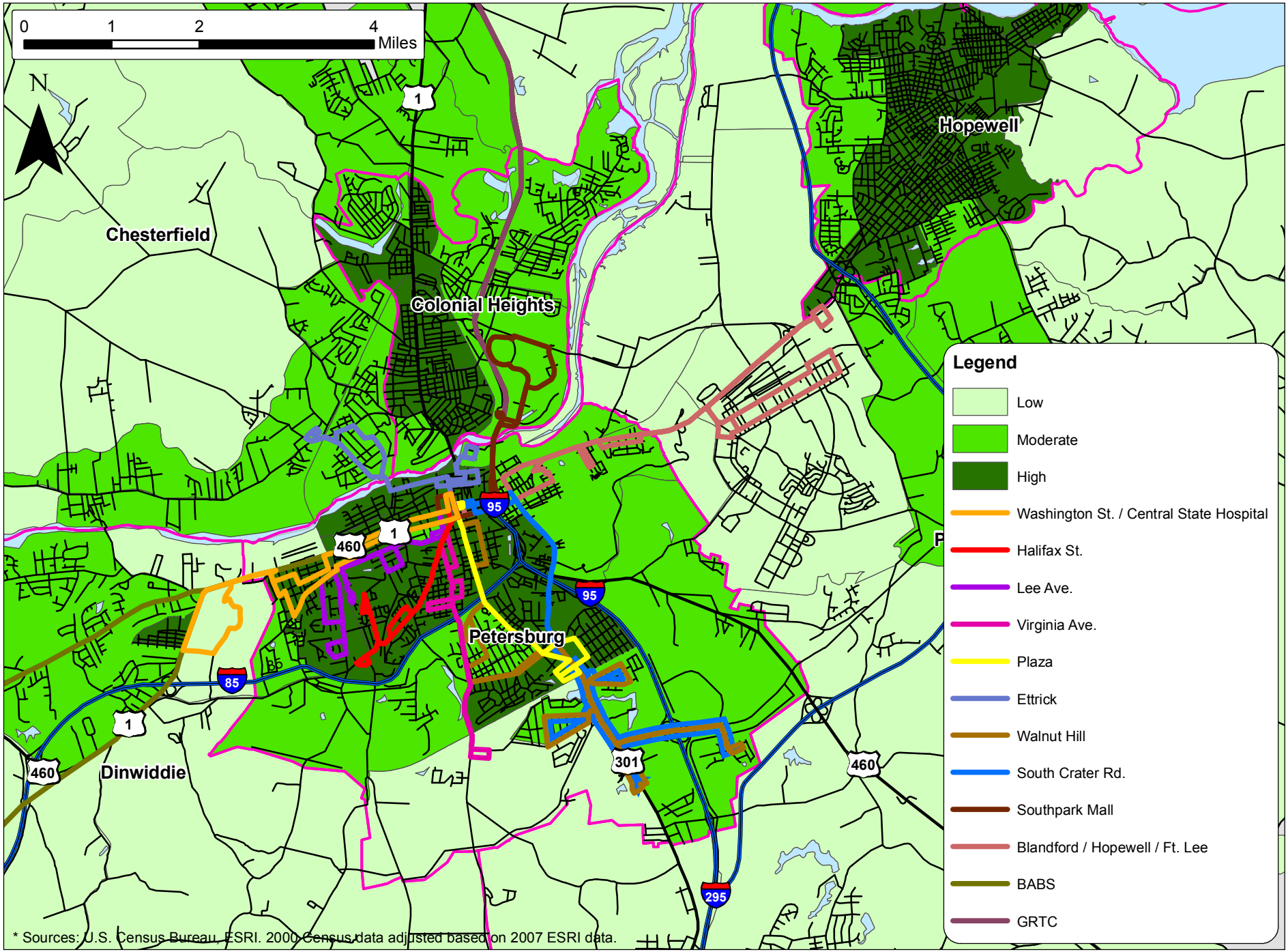


Figure 3-26 portrays the population densities of the Central Tri-Cities MPO region. This map indicates that almost all of Colonial Heights, with the exception of the commercial area surrounding Southpark Mall, exhibits population densities greater than 2,000 people per square mile. The City of Hopewell also exhibits transit-supportive population densities, with the exception of the eastern industrial portion of the City. Transit-supportive population densities are found north of I-85 in the City of Petersburg, as well as in several areas along the S. Crater Road Corridor.

The only densely populated areas of the Tri-Cities that currently have transit service are located in the City of Petersburg.

Major Trip Generators

Major trip generators are those facilities in the community to which a large number of people typically need to access for daily life activities. Major trip generators include educational facilities, grocery and pharmacy stores, human service agencies and job training centers, major employers, governmental offices, and medical facilities. Areas of trips origins such as apartment complexes, assisted living facilities, and senior housing complexes are also considered major trip generators.

For the purpose of this transit needs analysis, data concerning the locations of these facilities were collected and mapped. The purpose of this analysis is to develop a visual tool to examine the locations of important transit origins and destinations and look at the extent to which they are currently served by public transportation. In Figure 3-27, the entire study area is included. This map shows that most of the significant transit trip generators are clustered in the more urban areas of the Tri-Cities MPO region.

Figure 3-28 provides a map of the more urbanized portion of the Tri-Cities with the major trip generators indicated, along with the current transit routes. As the map indicates, most of the major trip generators in the City of Petersburg are served, with the exception of the Petersburg Interstate Industrial Park and the Petersburg Industrial Park.

In the City of Colonial Heights the only trip generators that are served on the current fixed-route network include the shopping destinations in the Southpark Mall area. High density housing is scattered in several areas of the City and there are potential medical and shopping destinations along the Boulevard, which is currently unserved.

Figure 3-26: Tri-Cities MPO: Population Density, 2007

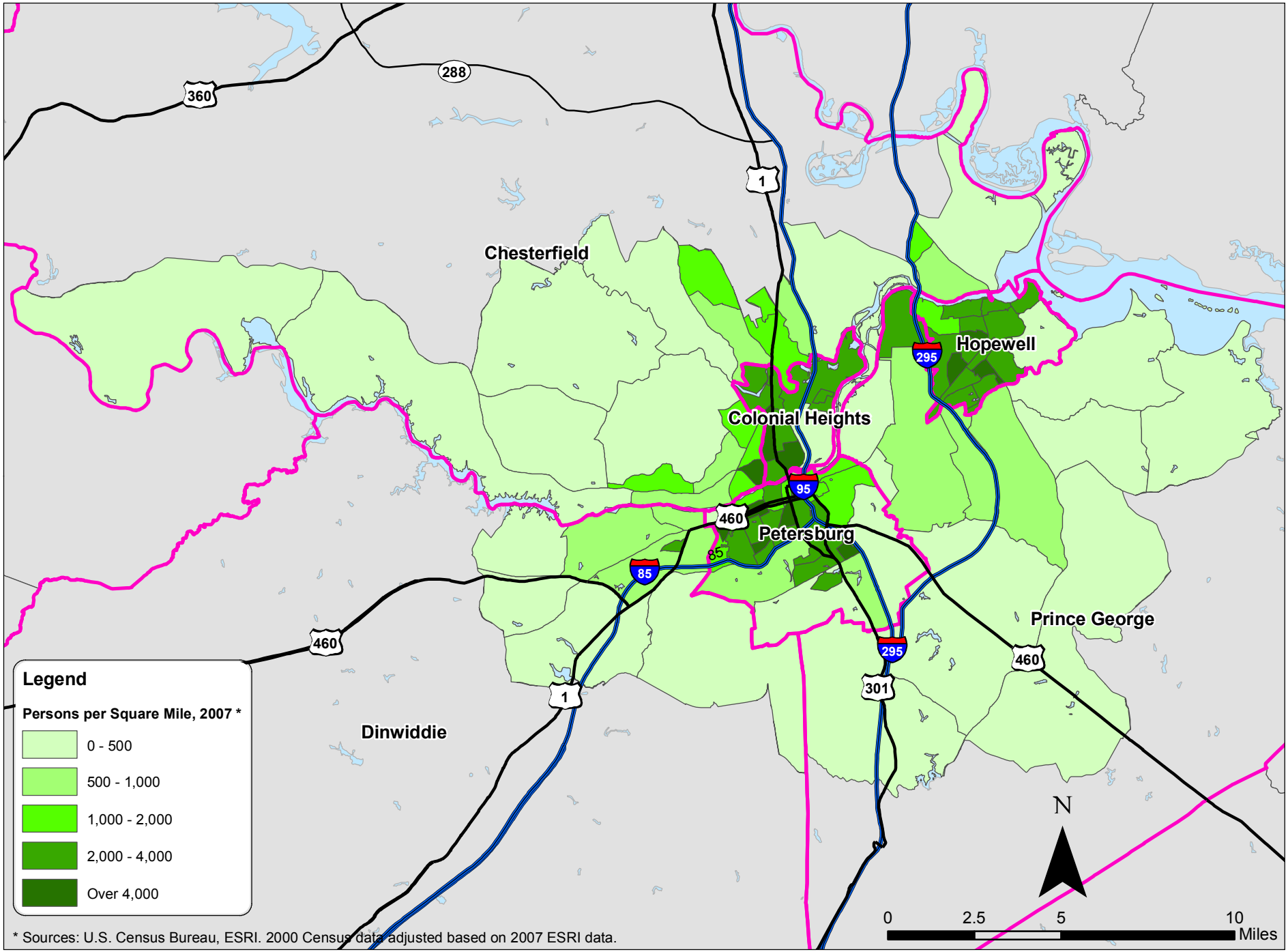


Figure 3-27: Tri-Cities MPO: Major Trip Generators

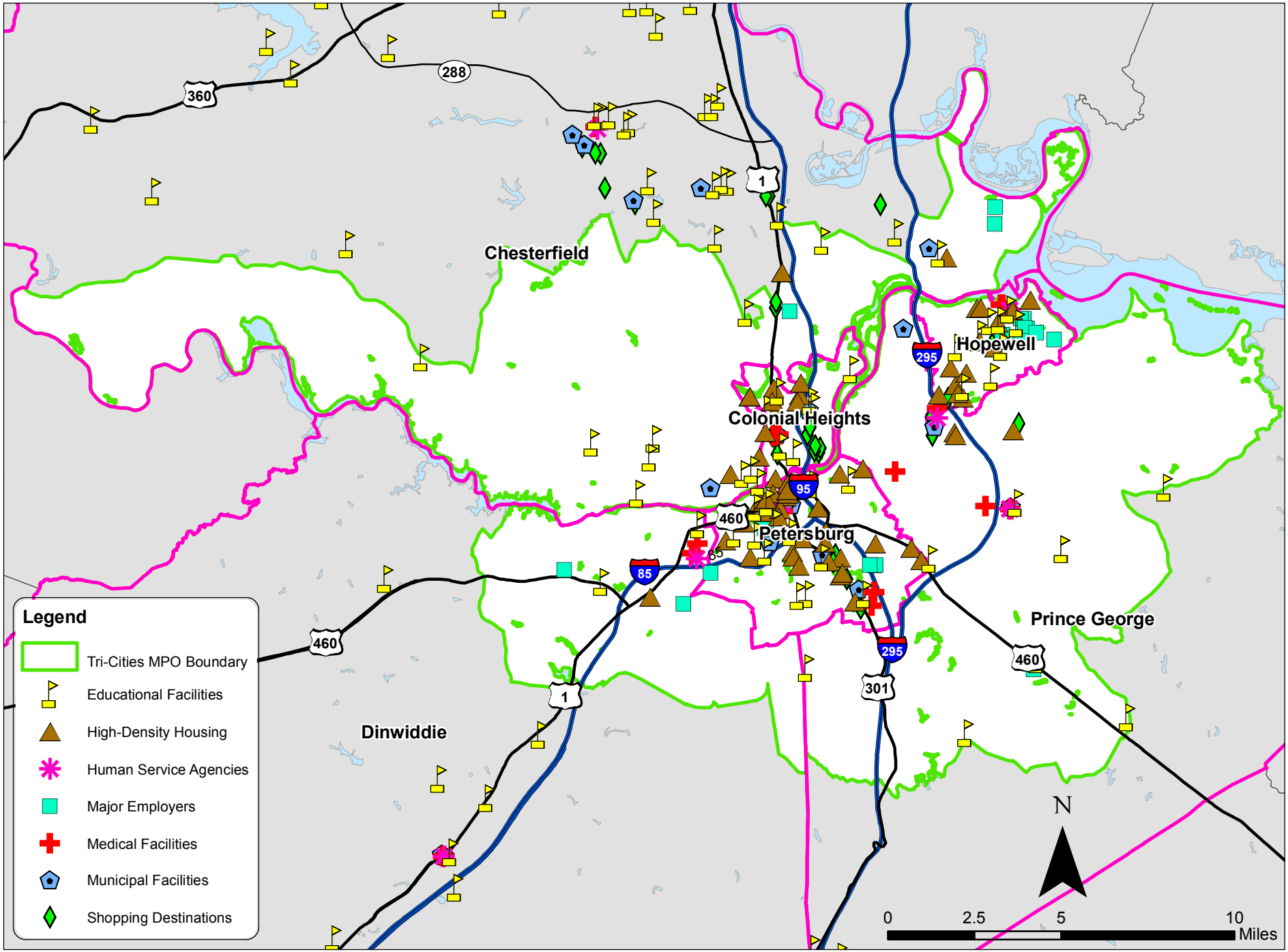
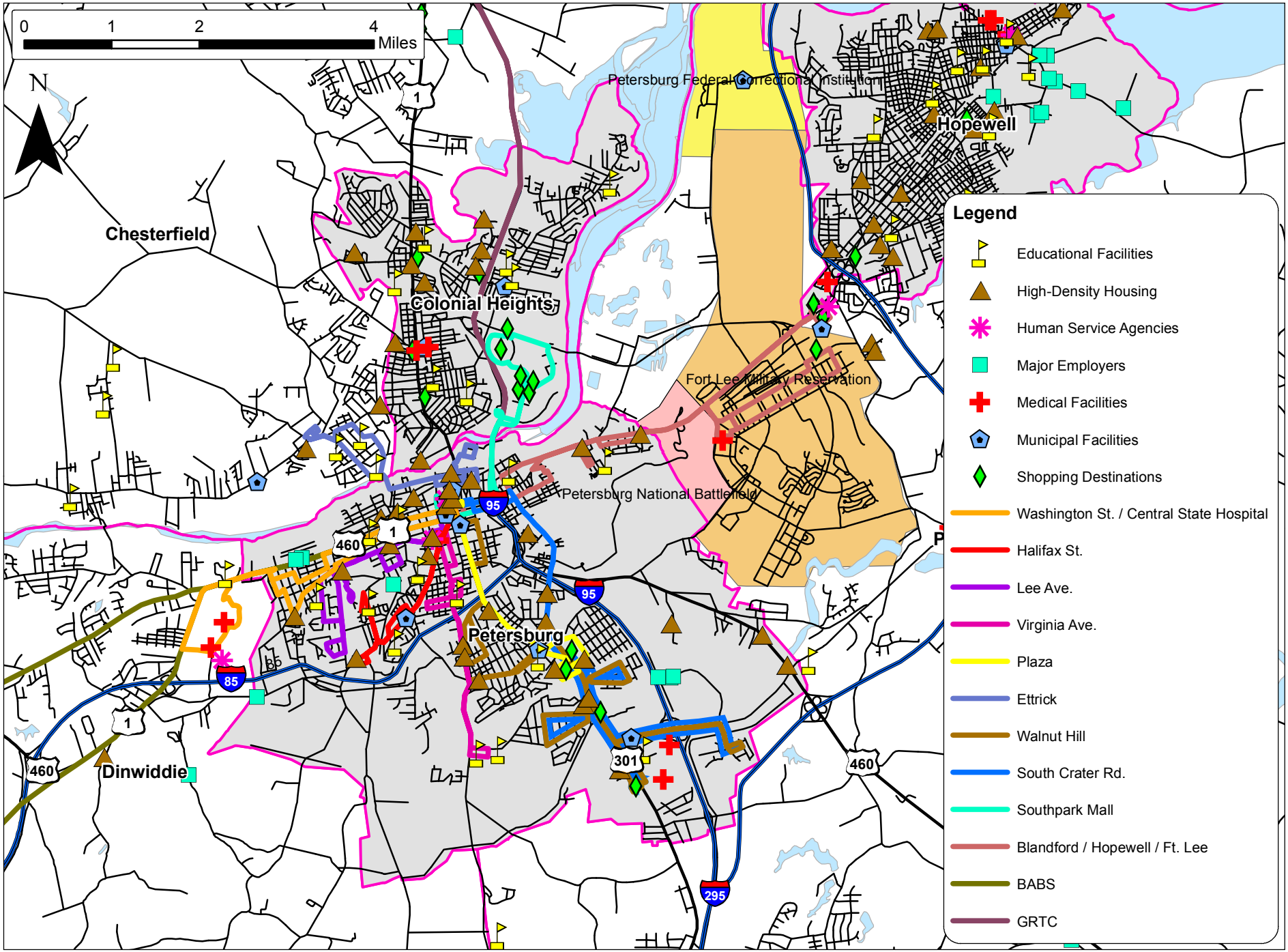


Figure 3-28: Central Tri-Cities MPO: Major Trip Generators



The small area of Chesterfield County that is served by PAT does include several major trip generators (Virginia State University and the Food Lion shopping center). In the City of Hopewell, the only trip generators that are currently served are those that are clustered near Oaklawn Plaza (the eastern terminus of the Blandford/Fort Lee/Hopewell PAT route). There are a significant number of high-density housing locations in the City of Hopewell and none of these are currently served by public transportation. John Randolph Medical Center, also in the City of Hopewell, is not served by public transportation either. Hopewell is also home to several major industrial employers located in the northeast quadrent of the city and none of these are served by transit.

With the exception of the Crossings Shopping Center, none of the trip generators in Prince George County are served by public transportation. Potential trip generators in Prince George County include the multi-family housing located along Jefferson Park Road, Branchester Lakes Shopping Center, and the County Courthouse and Administrative Complex.

In Didwiddie County, the Central State Hospital area is the only area served by PAT; however, other areas of Didwiddie County are served by BABS, including a high density housing location near the intersection of Routes 460 and 1.

Stakeholder Opinions Concerning Transit Needs

Representatives from each of the jurisdictions, from Fort Lee, and from the Southpark Mall were interviewed in person to discuss transit needs in the region. The following points summarize these discussions:

- A regional system is needed to address existing and future public transportation needs. The economy functions as a region, with various goods and services available in different jurisdictions in the region.

- There needs to be more interest among political leaders in order to implement regional transit services.

- There is a need to re-orient transit services in the region to reflect current land uses (i.e., the suburbanization of the region).

- Regional connections are needed among the Tri-Cities, as well as to Richmond.

- Service to Southpark Mall is needed from other areas within the region.

- The BRAC expansion of Fort Lee will result in a need for additional transit services. When the expansion is complete, there will be an additional 3,500 to 5,000 soldier/students temporarily living on base. These soldiers will not have personal vehicles and will want access to the local shopping and recreational opportunities, specifically on the weekends. Destinations include the Southpark Mall and the Crossings Shopping Center.

- There will be about 500 additional civilian jobs on Fort Lee. Many of these jobs are service oriented and employees may need additional transit options.

- There is a need for transit services in the City of Hopewell, both internal to the City and to access Fort Lee and Colonial Heights (Southpark Mall). Hopewell residents need access to job opportunities at Fort Lee and the Mall area.

- The need in Chesterfield County is primarily for people with disabilities, low income people, and elderly people. Access Chesterfield meets many of these needs.

- Additional regional cooperation is needed, both among the jurisdictions of the Tri-Cities MPO area and GRTC.

- The transit needs in Prince George County are more dispersed and may call for a demand-response type of transit service.

- There is a concern about the ability of local governments to fund additional transit services.

- The student government association president for Richard Bland College made a request for transit service, but did not follow-up in sharing the survey link with his students.

Public Opinion Survey

As part of the public outreach process for the TDP, a public opinion survey was conducted. The purpose of the survey was to solicit input from residents concerning transit needs. The survey was conducted electronically using Survey Monkey, with paper back-up copies available at area libraries. A press release was sent to local newspapers to advertise the availability of the survey. The electronic link was posted at the Crater Planning District Commission's website as well as several of the local jurisdictional websites. The Richmond Times Dispatch also wrote a brief article that included the web link to the survey.

Survey Results

One hundred and fifty-nine people participated in the public opinion survey. The majority of the survey respondents were non-users of public transportation in the region, with 82% indicating that they typically drive themselves to daily life activities such as work, medical, social, school, and shopping trips. Nine percent of the survey respondents reported using public transportation for their primary mode of transportation. These results are shown in Table 3-16.

The most surveys were received from residents of Prince George County (50), followed by Colonial Heights (17), and the City of Petersburg (15). Over 95% of the respondents reported that they have a driver's license and at least one available vehicle. The majority of the respondents were working adults with relatively high incomes, as shown in Table 3-17.

When asked to indicate why they did not use public transportation, the most frequently occurring answer was "no bus service is available near my home/work/school," with almost 60% of the respondents reporting this result. Table 3-18 provides the full responses to this question.

Survey respondents were asked to indicate if they think there is a need for additional or improved public transit services in a number of specifically-identified areas. The largest number of respondents indicated Prince George County (which could be expected, as the most number of surveys were received from Prince George County), followed by "to/from Richmond," "to/from Southpark Mall,", the City of Hopewell, Chesterfield County, "to/from Fort Lee," and the City of Colonial Heights. It should be noted that 22 respondents indicated that none were needed.

One of the survey questions asked the respondents if they thought regional services are needed in the Tri-Cities region. Of the 92 people who answered this question, 61 indicated that regional services are needed. The survey offered an opportunity to indicate what linkages were important and several were listed, with the overall theme indicating a desire for links among the population centers in the region, i.e., Richmond – Chesterfield – Petersburg – Hopewell - Prince George - Colonial Heights. More direct service to Southpark Mall from VSU and Fort Lee was also mentioned. Of the 108 people who answered the question, 75% indicated that they would use public transportation services in the Tri-Cities area if there was a service that met their travel needs.

Desired quality of service improvements included additional shelters, more access to transit information, and a more informative website.

Table 3-16: Primary Mode of Transportation

Answer Options	Drive Myself	Ride w/ Family/Friends	Public Transportation	Bicycle	Walk	Taxi	Other	Response Count
Work	120	4	17	0	2	0	1	144
Medical	132	9	11	0	0	0	0	152
Social/Recreational	116	24	7	1	1	0	0	149
School	73	4	15	0	1	0	3	96
Shopping/Errands	128	12	12	0	0	0	0	152
							answered question	**159**
							skipped question	**1**
Composite	569	53	62	1	4	0	4	693
	82%	8%	9%	0%	1%	0%	1%	

Table 3-17: Demographics

Do you have a driver's license?

Answer Options	Response Percent	Response Count
No	4.6%	5
Yes	95.4%	104
answered question		**109**
skipped question		**51**

Available Vehicles

Number of Vehicles	Response Percent	Response Count
0	4.6%	5
1	18.5%	20
2	25.9%	28
3	31.5%	34
4 or more	19.4%	21
answered question		**108**
skipped question		**52**

Age of Survey Respondents

Age Categories	Response Percent	Response Count
Under 12 years old	0.0%	0
12-17 years old	0.0%	0
18-25 years old	5.5%	6
26-55 years old	67.9%	74
56-64 years old	16.5%	18
65 years old or older	10.1%	11
answered question		**109**
skipped question		**51**

Employment Status of Survey Respondents

Employment Status	Response Percent	Response Count
Employed, full-time	61.1%	66
Employed, part-time	14.8%	16
Retired	18.5%	20
Student, full-time	6.5%	7
Student, part-time	0.0%	0
Homemaker	8.3%	9
Unemployed	3.7%	4
Other	2.8%	3
	answered question	**108**
	skipped question	**52**

Household Income of Survey Respondents

Income Levels	Response Percent	Response Count
$14,999 or less	1.0%	1
$15,000-$29,999	9.4%	9
$30,000-$44,999	21.9%	21
$45,000-$59,999	17.7%	17
$60,000-$74,999	12.5%	12
$75,000 or higher	37.5%	36
	answered question	**96**
	skipped question	**64**

Table 3-18: If you do not use any form of public transportation, why not?

Answer Options	Response Percent	Response Count
No bus service is available near my home/work/school.	59.7%	71
Need my car for emergencies/overtime.	26.9%	32
Need my car before/after work/school.	26.1%	31
Need my car for work.	25.2%	30
It might not be safe/I don't feel safe.	17.6%	21
Trip is too long/takes too much time.	17.6%	21
Don't know if service is available and/or location of stops.	16.8%	20
The hours of operation are too limited.	14.3%	17
Have to wait too long for the bus or between buses.	11.8%	14
Other (please specify):	10.1%	12
Have to transfer/too many transfers.	7.6%	9
Buses are unreliable/late.	7.6%	9
The bus is uncomfortable.	5.9%	7
The bus is expensive.	5.9%	7
I have limited mobility and it is hard for me to use the bus.	3.4%	4
	answered question	**119**
	skipped question	**41**

Other (please specify):

Live five minutes from Work and fifteen from shopping
My schedule it suits me to use my vehicle
It is not necessary. maintain the roads
Not convenient
Like driving myself back and force
Don't want to, I want to be in control of where and when I go places

I prefer bicycle over public transportation when it is available.
It's just plain cheaper to drive
Use personal vehicle
Don't like to
Medical reasons
Drivers drive so fast in my neighborhood I dont trust them!!

A number of general comments were offered by survey participants. Many of the comments were very thoughtful and comprehensive. Of the 50 general comments, there were 42 that either offered specific suggestions for transit services or general support for expanded service and eight that were critical or expressed a negative view toward any type of service expansions/dollar expenditures.

Specific suggestions included the need for service along the major corridors (including service to Richmond), additional service in Colonial Heights/the Boulevard, additional service in Prince George County, service to Hopewell, and rural services. The comments from the survey are provided in Appendix D.

SUMMARY

The primary public transit services operated in the Tri-Cities region are operated by PAT and focused on the travel needs of Petersburg residents. While there are PAT services that leave the City borders, they serve trip purposes needed by City residents (i.e., to access work opportunities at Southpark Mall, Fort Lee, Virginia State University, and Central State Hospital).

Ridership has been steadily increasing on PAT's fixed routes over the past several years, as has productivity. Expenses have been rising, particularly for FY 2010 as a result of the new Petersburg Station. Current riders indicated that they would like longer hours of service, service to Hopewell and Colonial Heights, more frequency of service, and Sunday services. There were also a number of requests for service to specific places, notably the new location of the Southside Regional Medical Center. The current riders are particularly satisfied with the cost of the fare and the driver courtesy.

The transit needs analysis indicated that there are several areas within the MPO region that fall into the high relative need category with regard to transit dependent demographics and are not served by transit. There are also areas that have transit-supportive population densities and are not currently served by public transportation. These areas include the Cities of Colonial Heights and Hopewell.

Transit needs in Prince George, Chesterfield, and Dinwiddie Counties are more dispersed in nature. Prince George County currently has the lowest level of transit service, with only one area served by PAT (the Crossings shopping center) and no local County-based provider.

The planned BRAC expansion at Fort Lee will drive unmet transit demand in several areas, with the most significant being:

- Transit services geared to temporary residents of the Fort to access local shopping and recreation destinations, primarily on the weekends.

- Transit services from the region to the Fort to access civilian service jobs.

The results of the public opinion survey indicated that the primary reason why people do not use transit is because service that would meet their travel needs is not available.

Chapter 4

Service and Organizational Alternatives

INTRODUCTION

The first three chapters prepared for the *Tri-Cities Area 2010 Transit Development Plan* documented transit needs in the region and outlined the services currently available. The development of these data collection and analysis reports showed that there are unmet transit needs in the study area. The purpose of this fourth chapter is to provide a series of service and organizational alternatives that could be implemented to meet these needs. Preliminary alternatives were discussed with the Technical Advisory Committee in early December, 2009 and are fully developed for consideration in this Chapter. Service alternatives are presented first, followed by the organizational alternatives.

SERVICE ALTERNATIVES

Two types of service alternatives are presented for consideration: potential improvements to the existing PAT transit network, primarily geared to the City of Petersburg, and potential new services to meet currently unmet transit needs, both regional and local. Each alternative is described, along with the advantages and disadvantages of each, and a cost estimate. The cost estimates are conservative, using PAT's fully allocated costs (i.e., including all administrative and operating costs). The alternatives are not presented in any particular order of priority.

Potential Improvements to the Existing PAT Transit Network

PAT Alternative #1- Split Blandford Route from the Hopewell/Fort Lee Route

In order to save on operating expenses in FY 2010, PAT combined the Blandford Route with the Hopewell/Fort Lee Route. This was geographically intuitive, as the Hopewell/Fort Lee Route travels through the Blandford area on its way to

Hopewell/Fort Lee. The issues that have arisen with this combination are that it is very crowded at particular times of day and that riders from some portions of the Blandford area end up riding all the way to Hopewell and back in to get home.

A low cost option for splitting this route would be for the Blandford Route to be paired with the Southpark Mall Route, which currently has a significant amount of down time each cycle. The bus would travel through the Blandford Road neighborhoods, come back downtown, and then travel to Southpark Mall.

Advantages

- Improves capacity on both the Blandford and Hopewell/Fort Lee portions of the route.
- Improves the productivity of the Southpark Mall Route, providing significantly more running time per vehicle service hour.
- Provides for a shorter trip for both the Blandford passengers and the Hopewell/Fort Lee riders.

Disadvantages

- Decreases productivity on the Hopewell/Fort Lee Route.
- May be a challenge to accomplish the Southpark Mall Route within 30 minutes on Saturdays and at peak shopping times.

Cost

- Minor incremental costs associated with the mileage, though there will be some costs associated with changing the printed routes and schedules.

PAT Alternative #2: Adjust South Crater Road and Walnut Hill Routes

The South Crater Road route is long and can barely accomplish its route in one hour. It also provides service to three residential neighborhoods that are also served by the Walnut Hill Route. These neighborhoods are Berkeley Manor, Battlefield Park, and Deerfield. There is also a need for one or both of these routes to add a segment to directly serve the new location of the Southside Regional Medical Center (SRMC) on Medical Park Boulevard, east of South Crater Road.

This alternative proposes to cut the Berkeley Manor and Battlefield Park neighborhoods from the South Crater Road Route and add the SRMC to the route. The Deerfield neighborhood would continue to be served by the South Crater Road Route. As such a major destination, the SRMC could also be served by the Walnut Hill route by

eliminating the Deerfield neighborhood, which would remain on the South Crater Road Route. Both routes would continue to serve the Wal-Mart area, as it is a major activity stop. These proposed revisions are shown in Figure 4-1.

Advantages

- Provides service to the hospital on a 30-minute frequency.
- Reduces the route mileage for the South Crater Road Route.
- Maintains the neighborhood service, though with 60-minute, rather than 30-minute frequency.

Disadvantages

- Reduces service to three neighborhoods, though hourly service is likely sufficient for the level of transit demand in these neighborhoods.

Costs

- This alternative is cost neutral with regard to operating costs, though there will be some costs associated with changing the printed routes and schedules.

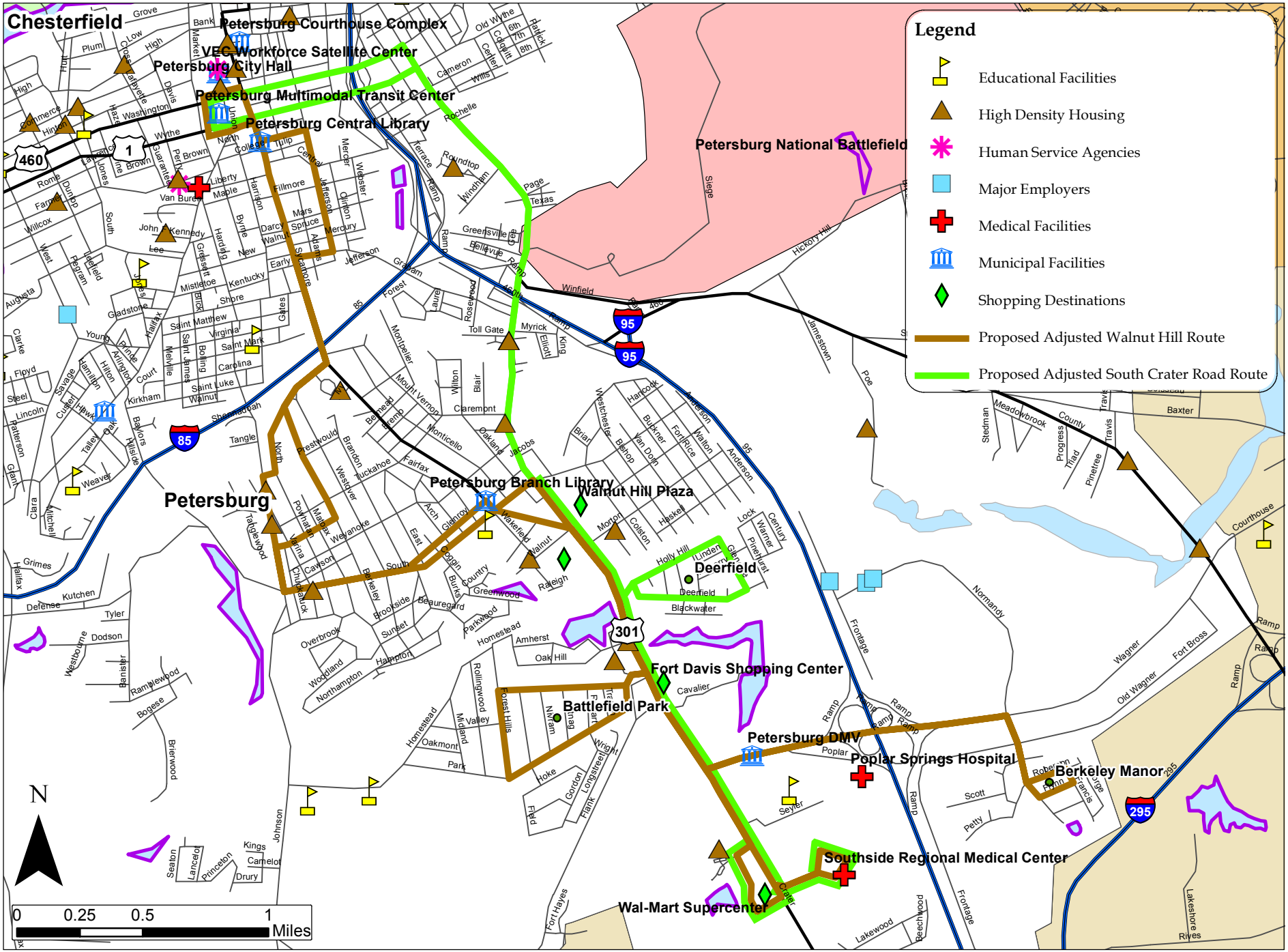
PAT Alternative #3: Consider Later Hours of Service on a Partial Route Network

Service currently ends between 5:30 p.m. and 7:30 p.m., depending upon the route and the day of the week. The most frequently requested improvement from the rider survey results was for longer hours of service. The focus of this alternative would be to offer limited evening service, offering transit services on a partial route network, based on where evening services are likely to be needed and most heavily used. The route network could be different for evening service, as it is in several cities, reflecting the lower potential demand and focusing on core ridership areas. For PAT, it would make sense to operate some kind of combined Washington Avenue/Lee Avenue Route, South Crater Road, South Park Mall, and possibly Ettrick. It is estimated that this configuration could be accomplished with three vehicles, plus an ADA complementary paratransit vehicle.

Advantages

- Allows riders to use PAT to get home from a retail job.
- Allows riders to attend evening classes and conduct errands in the evening.

Figure 4-1: Proposed Adjusted South Crater Road and Walnut Hill Routes



Disadvantages

- Adds service that is not likely to be as productive as daytime service.
- Adds operating expenses.

Cost

- If four vehicles were to be used (three fixed-route, one ADA) for an additional three hours of evening service, Monday through Saturday, the additional annual revenue service hours would be 3,720 at a cost of about $197,000 annually. Evening transit service has been recognized in the past as a legitimate use of Job Access and Reverse Commute (JARC) funds, so this may be a potential funding source to partially offset this expense.

PAT Alternative #4: Consider Reductions in Service on Saturdays

The Saturday ridership on the PAT system, as recorded during the boarding and alighting data collection period, is 61% of the weekday ridership; however almost the entire route network is in operation on Saturdays. This alternative considers looking closely at the Saturday ridership and reducing service where appropriate to reflect demand. For example, the Washington Avenue and the Lee Avenue routes had significantly lower ridership on Saturdays. Rather than offering 30-minute headways on these routes on Saturdays, it is suggested that these routes be interlined on Saturdays to offer hourly headways. This action would save 12.5 revenue service hours (one bus) on Saturdays, for a total of 650 annual operating hours.

Advantages

- Provides a level of service that more closely matches demand.
- Saves money.

Disadvantages

- Reduces service to a high need area.

Cost

- This alternative would save PAT about $34,450 annually.

PAT Alternative #5: Update Route Maps and Improve Web Site

The public information that is currently available for PAT services is out of date, including the route maps and schedules, and the web information. This alternative focuses on updating the route maps, schedules and web information to reflect current services. This should be done after any of the proposed TDP changes are adopted for implementation.

Advantages

- Provides accurate information to the public so that riders know where and when service operates.
- Serves as a marketing tool for PAT.

Disadvantages

- The only disadvantage is cost.

Cost

- A preliminary estimate for updating and printing the route and schedule brochures and updating the website is between $10,000 and $15,000.

Potential New Services

The transit needs analysis revealed that there are unmet transit needs in several areas of the region. Some of these needs are regional, i.e., connecting one jurisdiction to another, and some are local, i.e., providing public transportation options in jurisdictions that currently have little or no service.

New Service Alternative #1: Provide Additional Service in Colonial Heights

The only transit service currently provided in Colonial Heights is the PAT Southpark Mall route, which travels from downtown Petersburg via I-95 directly to the Mall area. The demographic analysis provided in Chapter 3 showed that there are areas of relatively high need in Colonial Heights, specifically in the Boulevard Corridor. Riders also requested transit service to the Boulevard area. This alternative proposes a new route, which could potentially supplant the current Southpark Mall Route. The proposed new route would originate in Petersburg at the Petersburg Station, travel on Wythe Street to Adams Street and into Colonial Heights via the Boulevard. The route would continue on the Boulevard to Temple Avenue. The route would then travel east on Temple Avenue to the Southpark Mall, making the current loop through the mall area. The route would leave the mall area via Temple and then make a right on Conduit

Road, serve the Colonial Heights Library, then make a left on Ellerslie, back to the Boulevard and then south on the Boulevard back to Petersburg. This route is shown in Figure 4-2 and is 11.5 miles round trip, which would allow one vehicle to complete the route in one hour.

Advantages

- Provides transit service to areas of Colonial Heights that do not currently have service, including the Boulevard and the Conduit Road area.
- Connects Colonial Heights residents to the mall area.
- Addresses a transit need that was expressed by current PAT riders.

Disadvantages

- There has not historically been a mechanism for transit services to be operated by PAT that do not primarily serve City residents.
- If this route supplants the current Southpark Mall route, the travel time from Petersburg to the Mall would be longer.

Cost

- If this service were be operated 12.5 hours per day, six days a week, using one vehicle, the total annual operating costs would be about $208,000 (assuming PAT operation). It should be noted that this route could supplant the current Southpark Mall route, which could result in a cost neutral solution, with the expectation that the City of Colonial Heights would enter into a cost-sharing arrangement with the City of Petersburg to contribute towards the annual operating costs for this route. If this new route supplants the current Southpark Mall route, an expansion vehicle would not be needed.

New Service Alternative #2: Provide a Direct Connection between Fort Lee/Hopewell and Southpark Mall

As discussed in Chapter 3, Fort Lee is expanding considerably and there will be many more soldiers living at Fort Lee temporarily while they complete different training programs. These soldiers typically do not have vehicles with them and have some time on the weekends to leave Fort Lee for shopping and recreational opportunities. The focus of this alternative is to provide a direct connection for these soldiers, as well as family members and employees of Fort Lee so they can access goods and services in a convenient manner. Figure 4-3 provides a map of the route, which is proposed to originate at the Southpark Mall, travel to Fort Lee, then to the

Figure 4-2: Proposed Colonial Heights Connector

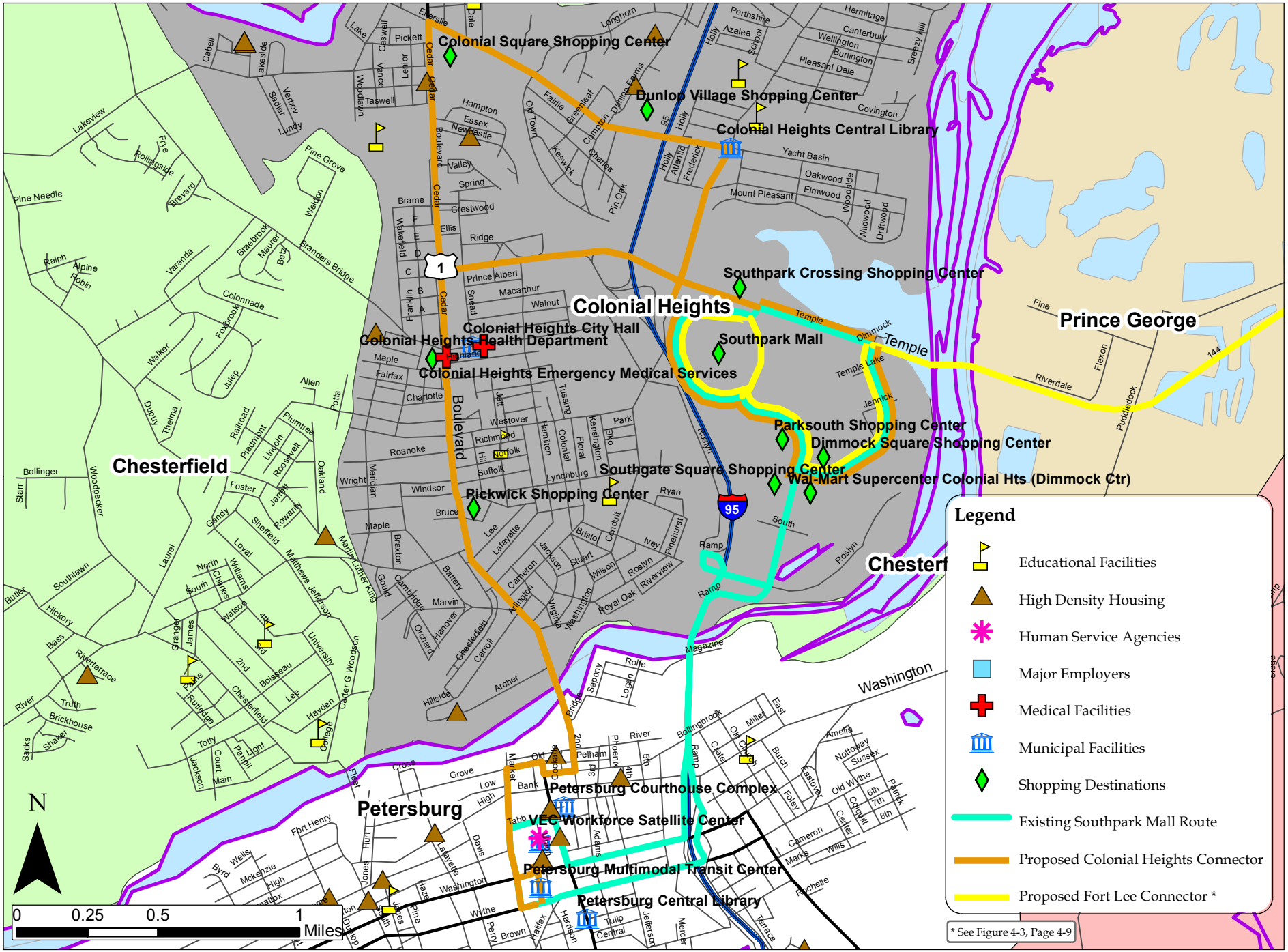
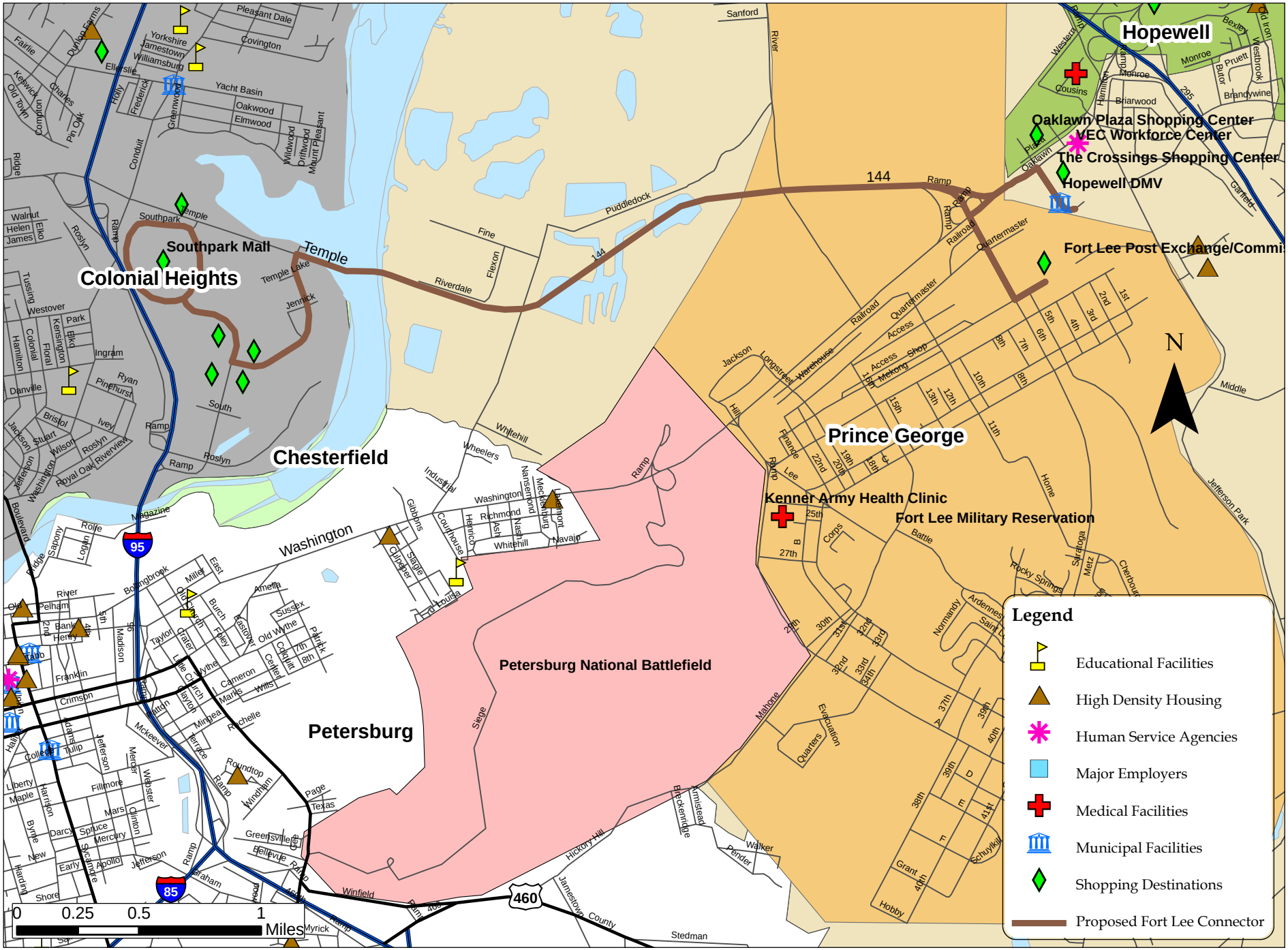


Figure 4-3: Proposed Fort Lee Connector



Crossings Shopping Center. The route would then do the same in reverse, but would not enter Fort Lee heading westbound (this option can be discussed, but would likely take too much time to enter Fort Lee in both directions and the extra ride time to the Crossings Shopping Center is relatively short). This route could offer a transfer with the current or changed Southpark Mall route at the Southpark Mall. There could also be transfer opportunities with the proposed Hopewell Circulator at the Crossings Shopping Center, allowing residents of Hopewell to access Fort Lee and the Southpark Mall.

The round trip mileage for this route is 11.5 miles, which would allow one vehicle to complete the trip on one hour. The hours of service for this route may need to be different from weekday to weekend to reflect likely demand. It is suggested that this route provide service in a complementary manner to the current Petersburg/Fort Lee Route and not supplant it, given that the origination is at the Southpark Mall, rather than Petersburg.

Advantages

- Provides access to shopping and recreational opportunities for Fort Lee residents and their family members.
- Provides access to job opportunities at Fort Lee and the Southpark Mall for Hopewell residents.

Disadvantages

- The only disadvantage is that there has not historically been a mechanism for transit services to be operated by PAT that do not primarily serve City residents.

Cost

- If service on this route were to be operated on a 14-hour span of service Monday through Saturday, with hours that vary according to demand, the annual cost of service would be $230,000. It would be expected that there would be a cost-sharing mechanism in place for this route, including contributions from Fort Lee, Hopewell, Prince George, and Colonial Heights. A vehicle would also be required to be purchased to operate this route. A heavy duty transit bus costs about $300,000 and a body-on-chassis 20-passenger vehicle costs about $60,000.

New Service Alternative #3: Provide Circulator Service in Hopewell

The transit needs analysis showed that there is a need for transit services in the City of Hopewell, both for internal City trips, and for regional trips. The concept for the Hopewell Circulator is to develop a convenient route that serves as many major origins and destinations as is feasible for one vehicle and offer a connection to the region at the Crossings Shopping Center (current terminus of PAT's Hopewell/Fort Lee route). A proposed route is provided as Figure 4-4. This route is 10.4 miles round trip, which is a little short for hourly service, but would allow for some additions to the route. It is anticipated that as a new service, there will likely be a few alterations from the original proposed route.

Advantages

- Provides transit service for Hopewell residents so that they can access employment, shopping, medical, and other necessary destinations.
- Connects Hopewell residents to the region via a transfer opportunity at the Crossing Shopping Center.
- Provides access to Hopewell destinations for other residents of the region.

Disadvantages

- The only disadvantage is cost.

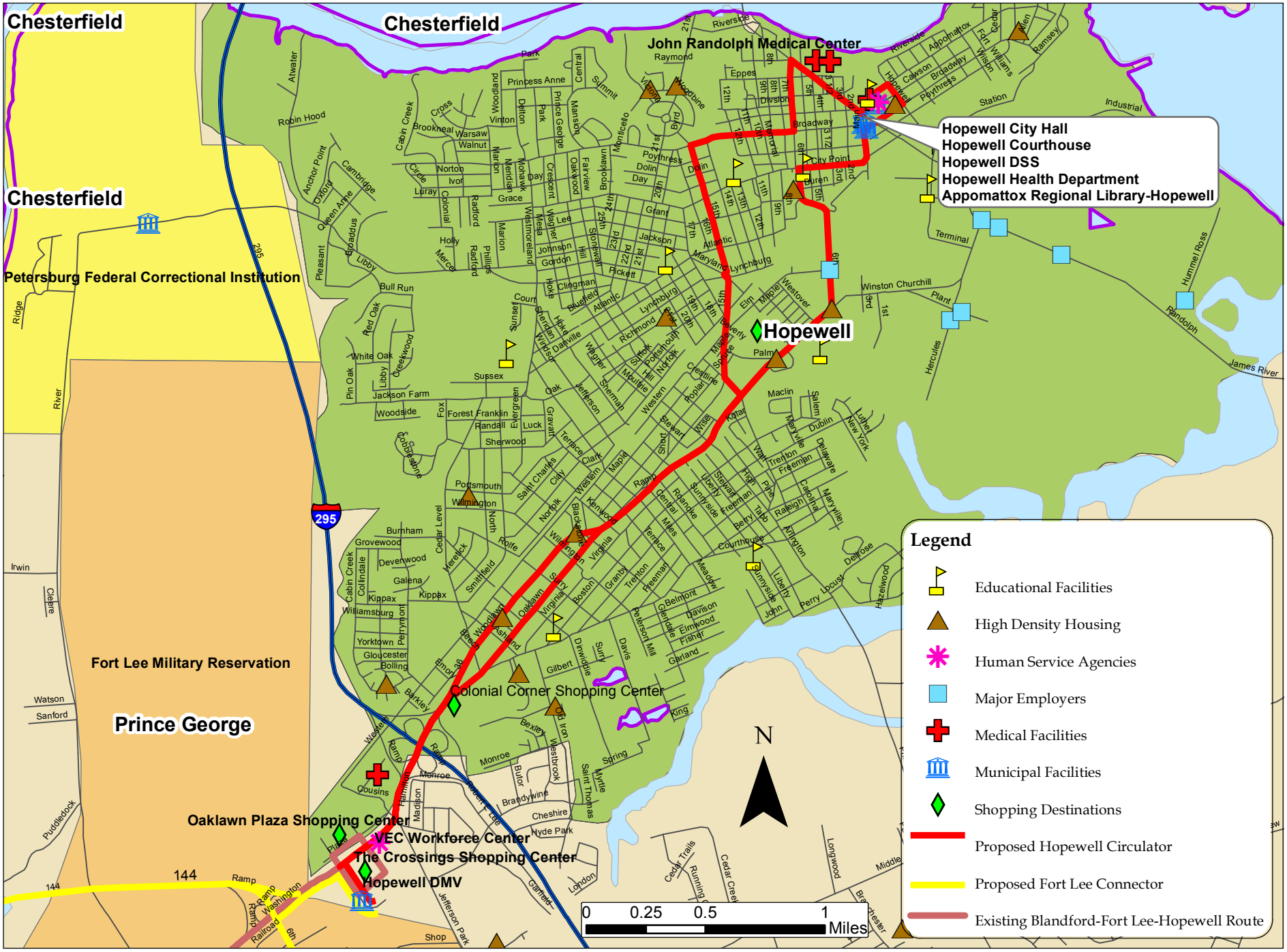
Cost

- This proposed circulator route, as a non-regional route, could be operated by the City of Hopewell or a contractor, rather than by PAT. This idea is suggested as an option, as Hopewell does have some experience operating service through its senior transportation program, and a local option would save on the deadhead mileage associated with traveling from Petersburg. If a 12-hour span of service were provided on this circulator Monday through Saturday, the annual operating costs would be about $197,000 annually (using PAT's costs). The costs could potentially be lower using the existing senior transportation program. A vehicle would be required for this service ($60,000 for a 20-passenger body-on-chassis vehicle).

New Service Alternative #4: Extend the VA Avenue Route to Richard Bland College

The Virginia Avenue route is currently the lowest ridership route in the PAT fixed route network. One way of boosting ridership on this route is to extend it to serve Richard Bland College, which would add an employment and educational

Figure 4-4: Proposed Hopewell Circulator



destination, as well as a housing origin (students). The College has an enrollment of about 1,600, with 81% commuting and 19% living on campus.

This proposal involves extending the route down Johnson Avenue from Petersburg High School to Richard Bland College. Figure 4-5 provides this alternative, which adds 4.4 miles to the route, for a total round trip of 11.4 miles.

Advantages

- Adds employment and educational destinations.
- Provides a transit option for the residential students at the College.
- Provides an opportunity to increase ridership on the Virginia Avenue Route.

Disadvantages

- Extending the route would mean that it could no longer be interlined with the Ettrick route.
- The area served has a relatively low population density, which would mean there would be few additional riders, other than those associated with the College.
- There may not be enough demand from the College to warrant this service.

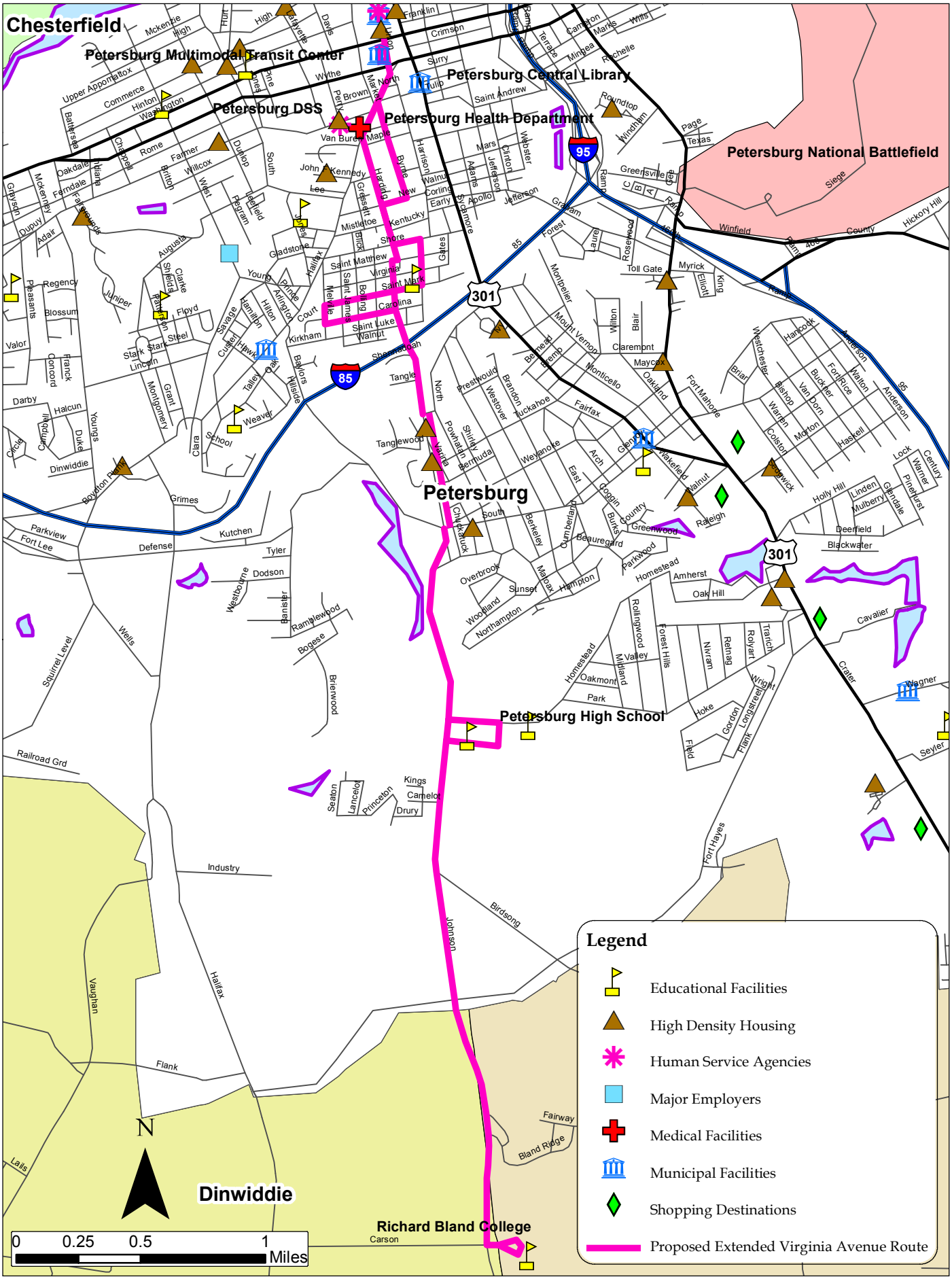
Cost

- The incremental cost to extend this route would be about $100,000 annually, but would also cause additional costs for the Ettrick route, unless another pair could be found to interline with Ettrick. Because this extension is not in the City and serves a specific institution, it would be appropriate for Richard Bland College to contribute toward this cost.

New Service Alternative #5: Provide New Demand-Response Service in Prince George County

Prince George County currently has the lowest level of transit service among the Metropolitan Planning Organization (MPO) jurisdictions. The transit needs analysis indicated that some level of transit service was needed in the County, starting with service for people with disabilities, the elderly, and people with low incomes. This proposal involves initiating a demand-response transportation program to begin to meet some of the County's most basic public transportation needs. A "starter" program would likely include two vehicles, operating Monday-Friday, ten hours a day or so. This type of program could be contracted to a private provider or an existing non-profit so to take advantage of existing capabilities in the area of scheduling, dispatch, and

Figure 4-5: Proposed Extended Virginia Avenue Route



oversight. It could be modeled after the program that is in operation in Chesterfield County- Access Chesterfield. If this alternative is pursued, it is recommended that the County apply for a New Freedom grant that could be used to help fund the expenses for the program. Oversight for the program could be provided by an existing County department, or through a mobility management program (see Organizational Alternative #2, page 4-19).

Advantages

- Provides basic mobility for people in Prince George County who currently have no transit service options.

Disadvantages

- The only disadvantage is cost.

Cost

- If two vehicles were in operation five days a week, ten hours a day, the total annual operating costs would be about $275,000. Two vehicles would cost about $60,000 each. It should be noted that the costs are based on PAT's operating costs, and may be lower with a local human non-profit or private operator.

Discussion of the Relationships Among Alternatives

Several of the service alternatives cannot be considered independently, as they have implications for other routes in the PAT network. These implications are discussed below.

- If the Southpark Mall is incorporated into a Colonial Heights route alternative, then it would not be able to be interlined with the Blandford route.

- If the Virginia Avenue route is extended to Richard Bland College, then it would not be able to be interlined with the Ettrick route.

- If both of these scenarios are implemented, the Ettrick route could be interlined with the Blandford route, offering a cost-effective solution.

Summary of Service Alternatives

Table 4-1 provides a summary of the service alternatives.

Table 4-1: Tri-Cities Area TDP Summary of Service Alternatives

Service Alternative	Purpose	Annual Operating Cost	Capital Needed	Capital Cost
PAT Alternative #1: Split Blandford Route from Hopewell/Fort Lee	Improve rider convenience and travel time and reduce crowding at certain times.	Potentially low cost, if Blandford paired with a Southpark Mall	None	$ -
PAT Alternative #2: Adjust South Crater Road and Walnut Hill Routes	To provide service to the Southside Regional Medical Center and reduce duplication of service in residential neighborhoods.	Cost Neutral	None	$ -
PAT Alternative #3: Consider Later Hours of Service on a Partial Route Network	To offer limited evening service to allow PAT riders to use transit to get home from retail jobs, evening classes, and errands.	$ 197,000	None	$ -
PAT Alternative #4: Consider Reductions in Service on Saturdays	To improve productivity and provide a level of service that more closely matches demand.	$ (34,450)	None	$ -
PAT Alternative #5: Update Route Maps and Improve Web Site	To provide accurate and timely information to the public.	$ 15,000	None	$ -
New Service Alternative #1: Provide Additional Service in Colonial Heights	Provide transit service geared to the needs of the residents of Colonial Heights, addressing transit need found through the demographic analysis and the surveys.	$ 208,000 or cost neutral if supplants the current route	1 vehicle or no vehicles, if supplants existing route	$300,000 or none, if supplants existing route

Table 4-1: Tri-Cities Area TDP Summary of Service Alternatives

Service Alternative	Purpose	Annual Operating Cost	Capital Needed	Capital Cost
New Service Alternative #2: Provide a Direct Connection between Fort Lee/Hopewell and Southpark Mall	Provide access to shopping and recreational opportunities for Fort Lee residents and their family members and provide access to job opportunities at Fort Lee and the Southpark Mall for Hopewell residents.	$ 230,000	1 vehicle	Heavy duty: $300,000 Body-on-Chassis: $60,000
New Service Alternative #3: Provide Circulator Service in Hopewell	To provide transit service for Hopewell residents so that they can access employment, shopping, medical, and other necessary destinations.	$ 197,000	1 vehicle	$ 60,000
New Service Alternative #4: Extend the VA Avenue Route to Richard Bland College	To add an employment and educational destination, provide a transit option for students, and provide an opportunity to increase ridership on the route.	$ 100,000	None	$ -
New Service Alternative #5: Provide New Demand-Response Service in Prince George County	To provide basic mobility for people in Prince George County who currently have no transit service options.	$ 275,000	2 vehicles	$ 120,000

ORGANIZATIONAL ALTERNATIVES

A variety of organizational alternatives can be considered to meet current and future regional transit needs, encourage more efficient coordination of transportation services, and promote more effective integration of land use and transit planning. These alternatives are:

- Maintain Current Organizational Structure
  -- Develop Mobility Management Program
- Create a new Transportation District
- Create a new Regional Transit Authority

This section reviews each option and describes the potential advantages and disadvantages of each. In addition, overriding issues that need to be considered, no matter which option is ultimately selected, are discussed at the end of this section.

Maintain Current Organizational Structure

PAT is currently the only public transportation provider in the study area that serves local transit needs. An obvious organizational option is to maintain the operation of transit services by the City of Petersburg through the current PAT structure. This alternative would be the simplest by maintaining the existing administrative and operational staff and current vehicle fleet, with expansion as needed based on the service improvements chosen.

The existing structure could serve as the foundation for a regional transit system, with system expansions taking place through contractual agreements with other jurisdictions within the MPO area. The City would remain the operator, with additional funds provided by neighboring jurisdictions to serve areas outside of the City. This strategy would provide customers with seamless regional services, and offer access to the many destinations and needed services in the area.

Advantages

- Easy to implement, requiring only contractual agreements to expand the base of service to meet the transit needs of the residents of neighboring jurisdictions.
- Allows for seamless connectivity from regional services to the City's route network.

Disadvantages

- Does not create "ownership" for the other jurisdictions. Control over the system would remain with the City.
- This structure has not yet been a successful model in the region for extending transit services to other jurisdictions in the region.
- The City continues to have the major responsibility for transit, even with an expanded service area.
- May not be an effective structure to address the rural public transportation needs in the region.
- Does not create a transit-specific entity that could be quasi-independent and potentially raise revenue.

It should be noted that if the current organizational structure is to remain in place, the City should work to re-engage a transit manager to allow for management focus on transit and to help ease the workload of the Director of Public Works and the PAT Administrative Manager. It would be difficult for PAT to expand without filling this role.

Develop Mobility Management Program

One mechanism that could be implemented in the short term, under the existing organizational structure, to help facilitate incremental transit improvements in the region is the development of a mobility management program. A Mobility Manager could be hired to help develop transit services geared to low income people and people with disabilities. The Mobility Manager could help implement a New Freedom-based mobility program in Prince George County, as well as help with the implementation of the Hopewell Circulator. The Mobility Manager could also help identify opportunities for coordination among existing human service transportation providers, including the senior programs currently operated by Colonial Heights and Hopewell. The Mobility Manager could be housed at the MPO, with Ridefinders, with PAT, or at one of the other participating jurisdictions.

Advantages

- Provides a focus on providing basic mobility service for people who are currently un-served.
- Provides a mechanism to look at coordinating existing human-service based transportation programs.
- Could be funded in part by either JARC or New Freedom and there is a locally-developed coordinated plan in place in the region, as required by these funding programs.

Disadvantages

- It would take some effort to establish such a program and none of the existing organizational structures have historically indicated a desire to put forth this effort.
- There are expenses associated with the development of a Mobility Management program, but these can be funded by a JARC or New Freedom grant, which has a funding split of 80% federal and 20% local.

Cost

- The cost to establish a program involves the salary and fringe for a staff person, as well as the associated costs involved with hosting an employee (telephone, computer, desk). The salary and fringe is estimated to be about $52,000 annually and the hosting expenses are estimated to be about $3,000.

Create a New Transportation District

In Virginia, local governments have a number of different ways to come together to create joint enterprises to perform public functions, including the provision of public transportation. The Transportation District Act of 1964 and the Virginia Code Chapters 15.2-4504-4526 provide the authority for jurisdictions to create a Transportation District.

This statute is summarized as follows:

Chapter 15.2-4504 to 4526
Chapter 15.2-4504. Procedure for creation of districts; single jurisdictional districts; application of chapter to port authorities and airport commissions. "Any two or more counties or cities, or combinations thereof, may, in conformance with the procedure set forth herein, or as otherwise may be provided by law, constitute a transportation district… A transportation district may be created by ordinance adopted by the governing body of each participating county and city…Such ordinances shall be filed with the Secretary of the Commonwealth.

Chapter 15.2-4506. Creation of Commission to Control Corporation.
Chapter 15.2-4507. Members of transportation district commissions. This would appear to state that the commission members must be appointed by the governing bodies of the members, but need not be members of the governing bodies (if the commission is one with powers set forth in subsection A of 15.2-4515).

Chapter 15.2-4515. Powers and functions generally. This includes preparation of a transportation plan, construction and acquisition of facilities, power to enter into agreements or leases with private companies for operation of facilities, and the ability to contract or agreement within the district (or with adjoining governments) regarding operation of services or facilities.

An example of a regional Transportation District in Virginia is the Potomac and Rappahannock Transportation Commission (PRTC). PRTC is comprised of five jurisdictions: Prince William and Stafford Counties and the Cities of Manassas, Manassas Park, and Fredericksburg. PRTC was established in 1986 to help create and oversee the Virginia Railway Express (VRE) commuter rail service and also to assume responsibility for bus service implementation. Currently, PRTC offers a comprehensive network of commuter and local bus services in Prince William County and the Cities of Manassas and Manassas Park, as well as a free ridematching service.

A Transportation District would be a new legally recognized agency comprised of the Tri-Cities MPO members, and have all of the powers necessary to operate a regional transit system. These responsibilities include the power to prepare transportation plans, construct and acquire the transportation facilities included in the transportation plan, operate or contract for the operation of transportation services, enter into contracts and agreements, and administer public transit funds. A Transportation District would be governed by a Commission, with the composition determined by the participating jurisdictions. This governing Commission would determine an equitable funding allocation among the participating jurisdictions.

A new Transportation District could negotiate with the City to assume ownership of the existing Petersburg Area Transit system and oversight of the existing personnel.

Advantages

- With the existing Virginia Code already in place, enabling legislation is not required.
- Seamless transit services could be provided.
- Would create an entity completely focused on public transportation, with regional ownership.
- Would raise the profile of transit services and needs throughout the region.
- Would be able to effectively address both urban and non-urban public transportation needs.

Disadvantages

- Creates a new entity that will have a variety of administrative and financial needs that are currently provided by the City (i.e., accounting, legal, cash flow management, human resources, risk management, insurance, etc.)
- The creation of a Transportation District does not provide any new revenue opportunities.
- There would be a considerable amount of time and effort involved in creating a Transportation District.

Create a New Service District

Virginia Code Chapters 15.2-2400-2403 also provides local governments in Virginia with the authority to establish a regional entity, in this case a Service District. Similar to a Transportation District, it would be comprised of the MPO jurisdictions. A major difference, however, is that a Service District could generate additional revenue through the ability to levy higher property taxes within the service district. The development of a Service District would not require enabling legislation.

This statute is summarized as follows:

Chapter 15.2-2400 to 2403
Chapter 15.2-2400. Creation of Service Districts: Provides authority for "any two or more localities" to form a service district by ordinance; requires public hearing.
Chapter 15.2-2401. Creation of Service Districts by Court Order in Consolidated Cities: Courts can order the creation of service districts in any city which results from the consolidation of two or more localities.

Chapter 15.2-2402. Description of Proposed Service District: Lists elements required in the ordinance or petition to create a service district—name, boundaries, purpose, facilities, plan for providing, and benefits.

Chapter 15.2-2403. Powers of Service Districts: Lists 13 powers of a service district. Subdivision 2 states that "in addition to services authorized by subdivision 1, transportation and transportation services within a service district, including, but not limited to: public transportation systems serving the district;" are authorized. Subdivision 3 provides authority to own facilities, equipment, property, etc. to provide such services. Subdivision 4 authorizes the district "To contract with any person, municipality or state agency to provide the governmental services authorized by subdivisions 1 and 2." Subdivision 6 authorizes districts to levy and collect property taxes to pay for the services authorized.

Service Districts can be created by a single city or county, or by combinations of cities and/or counties. Service Districts are governed by a development board or other body, with responsibilities agreed upon by the participating jurisdictions. Service Districts can construct, maintain, and operate the facilities and equipment that are necessary to provide a wide range of services, including public transportation systems. However, according to Virginia Department of Rail and Public Transit (DRPT) no jurisdictions in Virginia have used this organizational approach for the delivery of public transit services. Similar to a Transportation District, a Service District could operate transportation services or enter into contracts and agreements and administer public transit funds.

Advantages

- With the existing Virginia Code already in place, enabling legislation is not required.
- Seamless transit services could be provided.
- Would create an entity completely focused on public transportation, with regional ownership.
- Would raise the profile of transit services and needs throughout the region.
- Would be able to effectively address both urban and non-urban public transportation needs
- Would have the ability to raise revenue.

Disadvantages

- Creates a new entity that will have a variety of administrative and financial needs that are currently provided by the City (i.e., accounting, legal, cash flow management, human resources, risk management, insurance, etc.)
- The mechanism outlined in the statute for raising revenue (property taxes) may not be politically palatable.
- There are no other examples in Virginia that are using this approach for delivery of public transit services.
- There would be a considerable amount of time and effort involved in creating a Transportation Service District.

Create Regional Transit Authority (RTA)

An RTA would provide for the widest range of options and would have the fewest limitations. It would be a true regional entity that could include any or all of the MPO jurisdictions, and be a legal entity that would have all of the powers necessary to operate and expand transit service and facilities and provide for the development of new dedicated transportation funding source. The responsibilities of an RTA can be

limited to transit, or they could be expanded to other transportation services and facilities.

There is precedent in Virginia for establishment of a RTA. The Northern Virginia and Hampton Roads areas have established authorities, and recently in Williamsburg, James City County, the City of Williamsburg, the College of William and Mary, and the Colonial Williamsburg Foundation partnered to form a regional authority. A chief consideration in this decision to was the involvement of private institutions. Regional transit authorities are also under consideration in the Charlottesville and Fredericksburg areas.

However, the creation of an RTA would require a strong regional consensus, a local champion to facilitate the process, and subsequent enabling legislation. Many aspects related to formation of an RTA would need to be considered and determined, including the role and structure of a governing board.

Advantages

- Provides the ability to develop a dedicated funding source.
- Seamless transit services could be provided.
- Would create an entity completely focused on public transportation, with regional ownership.
- Would be able to effectively address both urban and non-urban public transportation needs.

Disadvantages

- Requires legislation to be enacted by the Virginia General Assembly.
- Creates a new entity that will have a variety of administrative and financial needs that are currently provided by the City (i.e., accounting, legal, cash flow management, human resources, risk management, insurance, etc.).
- Jurisdictions may feel loss of local autonomy.
- There would be a considerable amount of time and effort involved in creating a Transportation Authority.

Summary of Organizational Alternatives

Table 4-2 provides a summary of the organizational alternatives, allowing comparison with regard to important considerations.

Table 4-2: Summary of Organizational Alternatives

	Option 1	Option 2	Option 3	Option 4
	Maintain Current Organizational Structure	Create a new Transportation District	Create a new Service District	Create a new Regional Transit Authority
Process to Establish Entity to Support Regional Transit Services	Inter-governmental agreement between affected jurisdictions	Form Commission with composition determined by participating jurisdictions	Establish service district by ordinance and governed by development board or other body	Legislation enacted by the Virginia General Assembly
Transit Operation Responsibility	City of Petersburg	New Transportation District comprised of interested jurisdictions within the MPO region.	New Service District comprised of interested jurisdictions within the MPO region.	New regional entity
Administrative Structure	Use current PAT structure	Creates new entity	Creates new entity	Creates new entity
Ability to Raise New Revenues	No	No	Yes	Yes

FUNDING PROGRAMS TO SUPPORT POTENTIAL EXPANSIONS

In recognition of the importance of financing public transit in the region, this section reviews the typical funding strategies used for urban and rural general public transportation. Public transit is generally funded in the United States through a partnership arrangement between the federal government, state governments, local governmental or quasi-governmental entities (i.e., authorities), and riders. Federal

transit funding programs are categorized by the type of service area (i.e., rural, small urban, or large urban). There are also federal funding programs that target specific user groups such as people with disabilities and low income people.

For both urban and rural programs, the total program expenses are calculated. Fare revenue and advertising revenue (if applicable) is then applied to the expenses. The net deficit is then used as a basis for federal, state, and local funding.

Federal Financial Assistance

Section 5307

Prior to the 2000 Census, the Tri-Cities area was considered to be an urbanized area of between 50,000 people and 200,000 people. This status meant that the transit program operated by PAT was provided a specific allocation of federal funds (Section 5307 funds) each year and funds could be used for operating or capital purposes, with certain limitations.

With the regional growth in population and changes in commuting patterns, the Tri-Cities urbanized area was folded into the Richmond Urbanized area, which re-classified the transit program operating in Petersburg as "large urban." This change has meant that Petersburg is more restricted in the way in which it can use its federal funds (capital and specific capitalized items including ADA paratransit, preventive maintenance, and planning), and these funds come out of the larger pool of federal transit funds available for the Richmond Urbanized Area. This change has been difficult for Petersburg, as well as for a number of other transit programs that experienced a similar shift.

Section 5309

In addition to the annual S.5307 funding program, capital funding is also available through the Federal S.5309 program, which is the bus and bus-related facilities program. This program provides capital assistance for new and replacement buses and related equipment and facilities. Eligible capital projects include the purchase of buses for fleet and service expansion, bus maintenance and administrative facilities, transfer facilities, bus malls, transportation centers, intermodal terminals, park-and-ride stations, acquisition of replacement vehicles, bus rebuilds, bus preventive maintenance, passenger amenities such as passenger shelters and bus stop signs, accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fare boxes, computers and shop and garage equipment. Funds for the Section 5309 program are distributed on a discretionary basis by each State. Earmarks also flow through this program.

Section 5303

Federal planning assistance is also available in urbanized areas under the S.5303 program and these funds generally flow through the MPO.

Section 5311

In rural areas, federal financial assistance is provided through the S.5311 program. The State is the recipient of S.5311 funds, with local governments and non-profit agencies serving as the subrecipients. S.5311 funds can be used for operating and for capital. When used as an operating subsidy, the matching ratio for S.5311 is 50% federal and 50% local. When used as a capital subsidy, the matching ratio is 80% Federal and 20% local.

There is also a component of the S.5311 program (5311(f)), which provides assistance to support intercity bus service in rural areas where there is demand, but not enough fare revenue to be self-sustaining.

Sections 5310, 5316, and 5317

There are also three federal programs geared to specific user groups. These are the Sections 5310, 5316, and 5317 programs.

The S.5310 program provides financial assistance for purchasing capital equipment to be used to transport the elderly and persons with disabilities. S.5310 funds are apportioned annually by a formula that is based on the number of elderly persons and persons with disabilities in each State.

VDRPT is the designated recipient for S.5310 funds in Virginia, and private non-profit operators of services for the elderly and persons with disabilities are eligible subrecipients through an annual competitive selection process. The S.5310 program provides 80% of the cost of the equipment purchased, with the remaining 20% provided by the applicant organization.

The S.5316 (JARC) program provides funding for developing new or expanded transportation services that connect welfare recipients and other low income persons to jobs and other employment related services. JARC program funds are allocated to states through a formula based on the number of low-income individuals in each state.

In the Richmond Urbanized Area, Greater Richmond Transit Company (GRTC) is the designated recipient of these funds. GRTC, in consultation with the MPOs in the region, conduct the application process for these funds in the Tri-Cities region.

Projects are eligible for both capital (80/20 match) and operating (50/50 match). The JARC program could be a consideration for several of the proposed service alternatives, including later hours of service on the PAT network, the new service in Colonial Heights, and the Hopewell Circulator.

The S.5317 (New Freedom) program provides funding for capital and operating expenses designed to assist individuals with disabilities with accessing transportation services, including transportation to and from jobs and employment support services. Projects funded through the New Freedom program must be both new and go beyond the requirements of the ADA of 1990. Similar to the JARC Program, GRTC is the designated recipient of these funds and conducts the application process, in consultation with the two regional MPOs. The New Freedom program is a potential funding source for the Mobility Management program and for the development of a demand response transportation program in Prince George County.

Any project funded through the S 5310, JARC, or New Freedom programs must be derived from a locally developed, coordinated public transit-human services transportation plan, and in Virginia specifically through a Coordinated Human Service Mobility Plan (CHSM). Therefore, any services funded through these three programs must meet one of the identified strategies included in the Richmond/Petersburg Coordinated Human Service Mobility Plan.

Congestion Mitigation and Air Quality (CMAQ)

These funds originate at the federal level, jointly administered by the Federal Transit Administration and the Federal Highway Administration and are administered locally by the Tri-Cities MPO. Among the many types of projects eligible for funding under the CMAQ program are those that reduce single occupant automobile use, which can help reduce air pollution. These funds can be used to help initiate transit services, including both operating and capital at 100% for a three-year demonstration period.

State Financial Assistance

The State of Virginia provides support for transit programs through a variety of programs, including the following:

- **Formula Assistance:** Supports costs borne by eligible recipients for operating related public transportation expenses. Up to 95% of eligible expenses.

- **Capital Assistance:** Supports costs borne by eligible recipients for public transportation capital projects. Up to 95% of eligible expenses.

- **Transportation Demand Management (TDM)/Commuter Assistance:** Supports administration of existing or new local and regional TDM or Commuter Assistance programs. Up to 80% of eligible expenses

- **Demonstration Project Assistance:** Assists communities in preserving and revitalizing public or private public transportation service by implementing innovative projects for one year of operation. Up to 95% of eligible expenses. The proposed Hopewell Circulator could potentially be funded through this program, though it is not clear if the State has demonstration funds currently available.

- **Technical Assistance:** Supports planning or technical assistance to help improve or initiate public transportation related services. Up to 50% of eligible expenses.

- **Intern Program:** Supports increased awareness of public transportation as a career choice for aspiring managers. Up to 95% of eligible expenses.

- **Transportation Efficiency Improvement Funds (TEIF):** Supports reduction in demand for new/expanded transportation facilities that serve single occupant vehicles and initiatives at the state, regional, and community level that demonstrate innovative approaches to reducing traffic congestion up to 80% of eligible expenses.

Local Funding Options

The mechanisms used to match federal and state funds can be derived from a number of sources including city/county general revenues, particular taxes or fees locally authorized to support transit, and human service agency contractual revenue.

Chapter 5

Operations Plan

INTRODUCTION

The Tri-Cities Area 2010 Transit Development Plan has included four technical memoranda that provided an overview and analysis of public transit services in the Tri-Cities, discussed goals, objectives, and standards, analyzed the need for transit services, and developed potential organizational and service alternatives for improving public transportation in the region. The process has been guided by the Tri-Cities Area Metropolitan Planning Organization's Technical Committee.

This operations plan is organized in three sections, and each section includes constrained and unconstrained projects. The major sections are: 1) recommendations concerning changes to the existing public transit services; 2) recommendations for new transit services; and 3) organizational recommendations. Chapters 6 and 7 provide the companion capital and financial plans.

RECOMMENDATIONS CONCERNING THE EXISTING PUBLIC TRANSIT SERVICES

Constrained Plan

Given the economic climate during which this plan is being prepared, most of the constrained recommendations concerning the existing public transit network include ways in which service can be provided more effectively. The original TDP goals were more visionary than the current fiscal realities will allow.

The following recommendations for the existing PAT transit service network have been endorsed by the Technical Committee:

- ***Modify the South Crater Road and Walnut Hill Routes*** to provide service to the Southside Regional Medical Center (SRMC), reduce service duplication, and improve on-time performance. Berkeley Manor and Battlefield Park neighborhoods will be cut from the South Crater Road Route and the SRMC will be added to the route. The Deerfield neighborhood will continue to be served by the South Crater Road Route. As such a major destination, the SRMC will also be served by the Walnut Hill Route by eliminating the Deerfield neighborhood, which will remain on the South Crater Road Route. Both routes would continue to serve the Wal-Mart area, as it is a major activity stop. The map for this recommendation is presented as Figure 5-1. This recommendation is cost neutral with regard to operating costs, though there will be some costs associated with changing the printed routes and schedules.

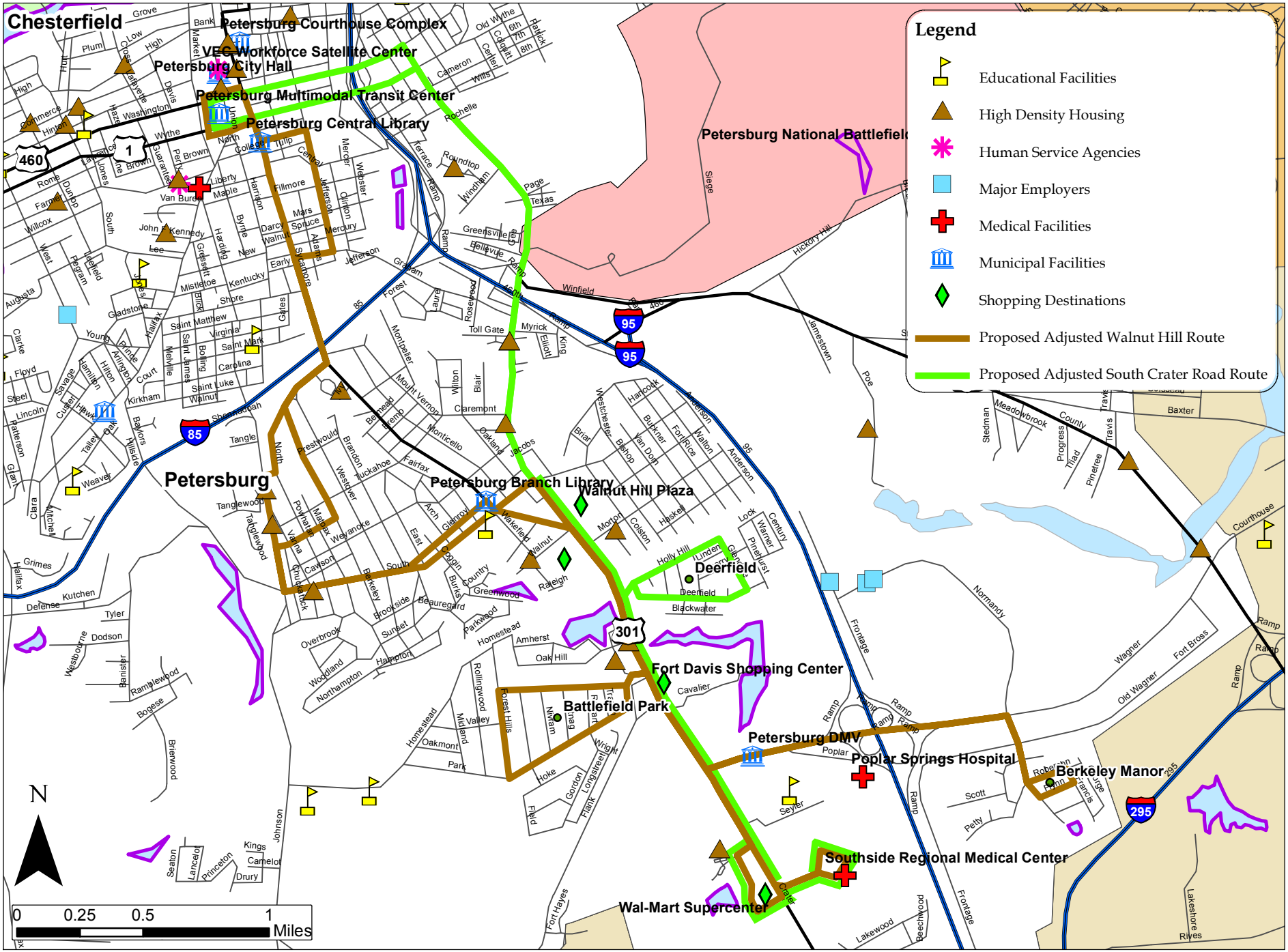
- ***Reduce Saturday Service to Reflect Demand.*** The Saturday ridership on the PAT system, as recorded during the boarding and alighting data collection period, is 61% of the weekday ridership; however almost the entire route network is in operation on Saturdays. This recommendation considers looking closely at the Saturday ridership and reducing service where appropriate to reflect demand. For example, the Washington Avenue and the Lee Avenue Routes had significantly lower ridership on Saturdays. Rather than offering 30-minute headways on these routes on Saturdays, it is suggested that these routes be interlined on Saturdays to offer hourly headways. This action would save 12.5 revenue service hours (one bus) on Saturdays, for a total of 650 annual operating hours.

    - ***Cost.*** Reducing Saturday service for Lee Avenue and Washington Avenue would save PAT about $34,450 annually.

- ***Update Route Maps and Improve Website.*** The public information that is currently available for PAT services is out of date, including the route maps and schedules and the web information. This alternative focuses on updating the route maps, schedules, and website information to reflect current services. This should be done after the proposed TDP changes are adopted for implementation.

    - ***Cost.*** A preliminary estimate for updating and printing the route and schedule brochures and updating the website is between $10,000 and $15,000.

Figure 5-1: Proposed Adjusted South Crater Road and Walnut Hill Routes



Unconstrained Plan

The City of Petersburg does not currently have transit expansion funds available. If funds were to become available, for example through the reauthorization of the federal transportation legislation, the following project could be implemented.

- ***Provide Limited Evening Service.*** Transit service currently ends between 5:30 p.m. and 7:30 p.m., depending upon the route and the day of the week. The most frequently requested improvement from the rider survey results was for longer hours of service. The focus of this project is to provide limited evening service, offering transit services on a partial route network, based on where evening services are likely to be needed and most heavily used. The route network could be different for evening service, as it is in several cities, reflecting the lower potential demand and focusing on core ridership areas. For PAT, it would make sense to operate some kind of combined Washington Avenue/Lee Avenue Route, South Crater Road, South Park Mall, and possibly Ettrick. It is estimated that this configuration could be accomplished with three vehicles, plus an ADA complementary paratransit vehicle. This project will likely need to wait until funds become available.

    - ***Cost.*** If four vehicles are used (three fixed-route, one ADA) for an additional three hours of evening service, Monday through Saturday, the additional annual revenue service hours would be 3,720 at a cost of about $197,000 annually. Evening transit service has been recognized in the past as a legitimate use of Job Access Reverse Commute (JARC) funds, so this may be a potential funding source to partially offset this expense. JARC funds provide a 50% match for operating projects, which would bring the local cost to $98,500 annually, if PAT were to be awarded a JARC grant.

RECOMMENDATIONS FOR NEW SERVICES

The transit needs analysis revealed that there are unmet transit needs in several areas of the region. Some of these needs are regional, i.e., connecting one jurisdiction to another, and some are local, i.e., providing public transportation options in jurisdictions that currently have little or no service.

Constrained Plan

- ***Provide Circulator Service in Hopewell.*** The transit needs analysis showed that there is a need for transit services in the City of Hopewell, both for internal City trips, and for regional trips. The concept for the Hopewell Circulator is to develop a convenient route that serves as many major origins and destinations as is feasible for one vehicle and offer a connection to the region at the Crossings Shopping Center (current terminus of PAT's Hopewell/Fort Lee Route). A proposed route is provided as Figure 5-2. This route is 10.4 miles round trip, which is a little short for hourly service, but would allow for some additions to the route or allow for a deviated fixed-route, which would eliminate the need for separate ADA complementary paratransit. It is anticipated that as a new service, there will likely be a few alterations from the original proposed route. The City of Hopewell has sponsored a 2010 Congestion Mitigation and Air Quality (CMAQ) candidate project for this service and the project rated high. FY 2011 funds through the CMAQ program are likely to be available for this project. If CMAQ funds are awarded, the grant would be for a three-year demonstration project. After the demonstration period, the City would consider a service contract with PAT for regular fixed-route service. This concept was originally developed with the thought that PAT would be the operator of the service; however, as the sponsor of the CMAQ grant, the City of Hopewell was considering operating the service itself, as they do already operate a senior transportation program. Subsequent guidance from VDRPT indicated that PAT, as the region's designated recipient for Federal S.5307 funds, would need to take the lead on providing service funded under a CMAQ grant. It may be possible for PAT to subcontract the actual operation back to the City of Hopewell.

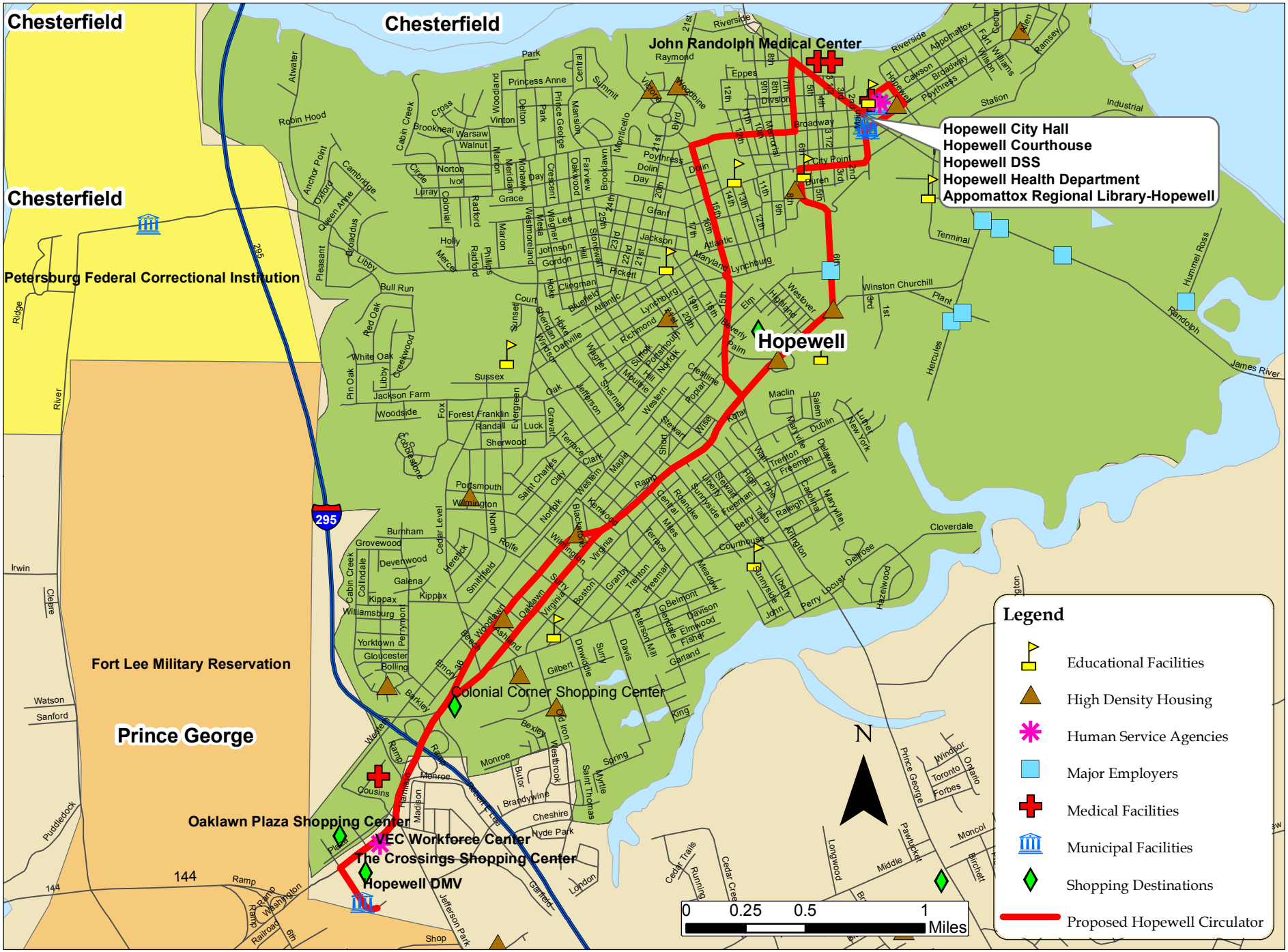
    - ***Cost.*** If a 12-hour span of service were provided on this circulator, Monday through Saturday, the annual operating costs would be about $197,000 annually (using PAT's costs). The costs could potentially be lower using the existing senior transportation program. A vehicle would be required for this service ($60,000 for a 20-passenger body-on-chassis vehicle).

Unconstrained Plan

There are three recommended projects that were conceptually endorsed, but are not currently funded. These projects are outlined below.

- **Provide Additional Service in Colonial Heights.** The only transit service currently provided in Colonial Heights is the PAT Southpark Mall Route, which travels from downtown Petersburg via I-95 directly to the Mall area.

Figure 5-2: Proposed Hopewell Circulator



The demographic analysis provided in Chapter 3 showed that there are areas of relatively high need in Colonial Heights, specifically in the Boulevard Corridor. Riders also requested transit service to the Boulevard area. This recommendation proposes a new route, which could potentially supplant the current Southpark Mall Route. The proposed new route would originate in Petersburg at the Petersburg Station, travel on Wythe Street to Adams Street and into Colonial Heights via the Boulevard. The route would continue on the Boulevard to Ellerslie, and then travel east to make a right onto Conduit to the Southpark Mall, and then making the current loop through the mall area and would return via the same path. This route is shown in Figure 5-3 and is 12.7 miles round trip, which would allow one vehicle to complete the route in one hour.

- ***Cost.*** If this service were be operated 12.5 hours per day, six days a week, using one vehicle, the total annual operating costs would be about $208,000 annually (assuming PAT operation). It should be noted that this route could supplant the current Southpark Mall route, which could result in a cost neutral solution, with the expectation that the City of Colonial Heights would enter into a cost-sharing arrangement with the City of Petersburg to contribute towards the annual operating costs for this route. If this new route supplants the current Southpark Mall Route, an expansion vehicle would not be needed. If an expansion vehicle is needed, the capital cost for that vehicle would be about $300,000.

- **Provide a Direct Connection between Fort Lee/Hopewell and Southpark Mall.** As discussed in Chapter 3, Fort Lee is expanding considerably and there will be many more soldiers living at Fort Lee temporarily while they complete different training programs. These soldiers typically do not have vehicles with them and have some time on the weekends to leave Fort Lee for shopping and recreational opportunities. The focus of this project is to provide a direct connection for these soldiers, as well as for family members and employees of Fort Lee, so that they can access goods and services in a convenient manner. Figure 5-4 provides a map of the route, which is proposed to originate at the Southpark Mall, travel to Fort Lee, then to the Crossings Shopping Center. The route would then do the same in reverse, but would not enter Fort Lee heading westbound (this option can be discussed, but would likely take too much time to enter Fort Lee in both directions and the extra ride time to the Crossings Shopping Center is relatively short). This route could offer a transfer with the current or changed Southpark Mall route at the Southpark Mall. There could also be transfer opportunities with the proposed Hopewell Circulator at the Crossings Shopping Center, allowing residents of Hopewell to access Fort Lee and the Southpark Mall. The round trip mileage for this route is 11.5 miles, which would allow one vehicle to

Figure 5-3: Proposed Colonial Heights Connector

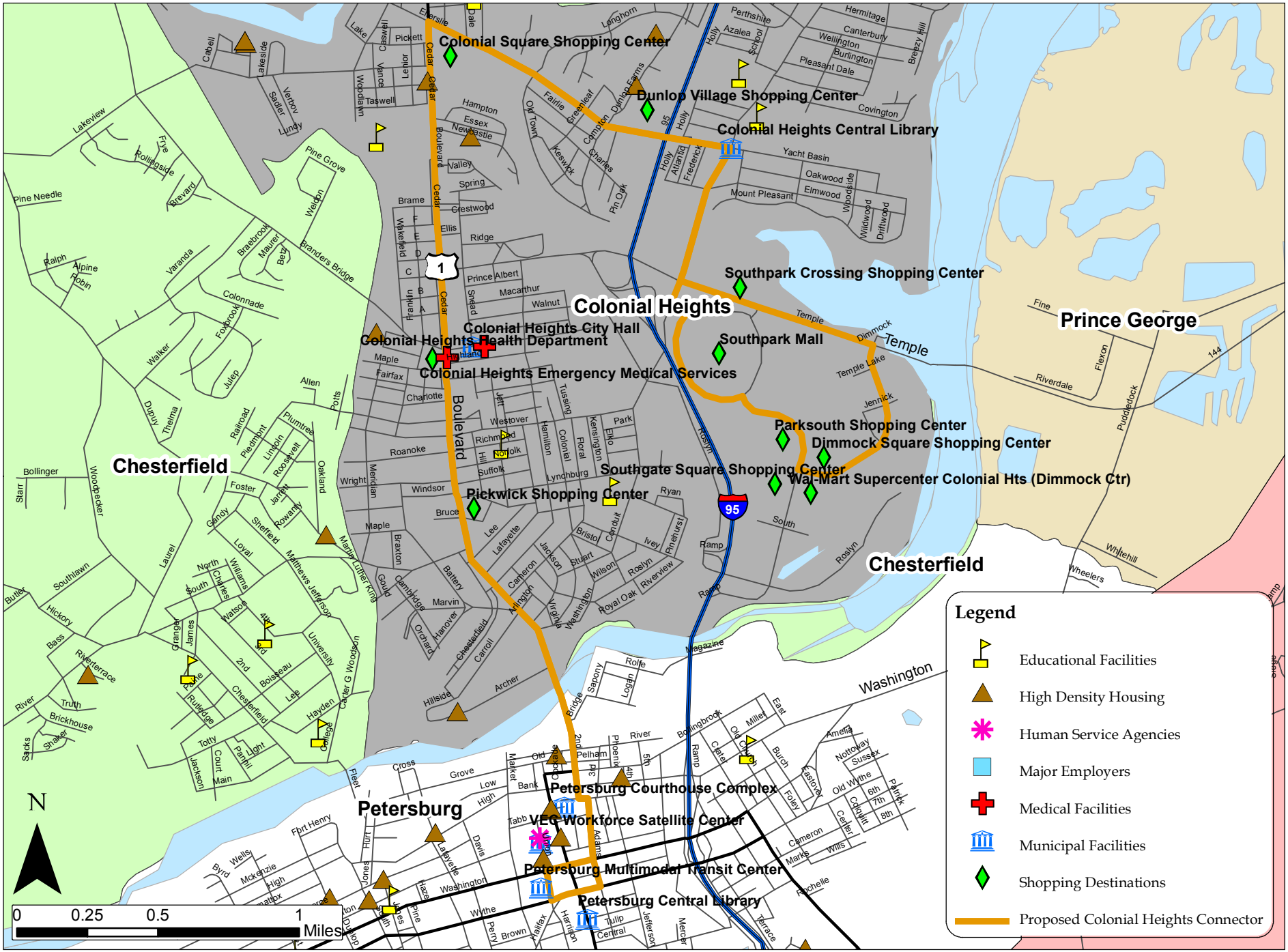
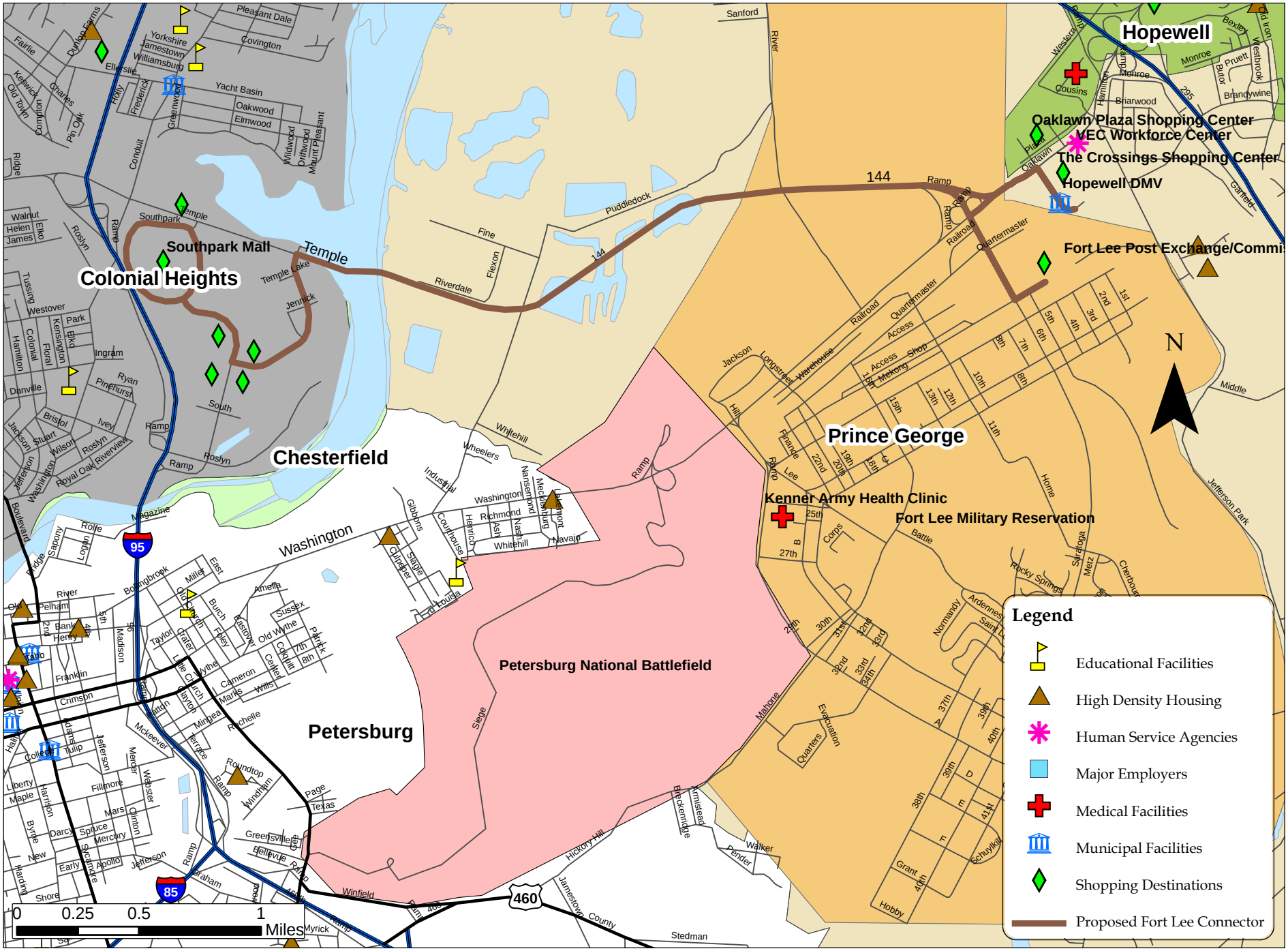


Figure 5-4: Proposed Fort Lee Connector


Hopewell
Oaklawn Plaza Shopping Center
VEC Workforce Center
The Crossings Shopping Center
Hopewell DMV
Fort Lee Post Exchange/Commi
Southpark Mall
Colonial Heights
Chesterfield
Prince George
Kenner Army Health Clinic
Fort Lee Military Reservation
Petersburg National Battlefield
Petersburg
144
Temple
Puddledock
Riverdale
Washington
Whitehill
Ramp
Railroad
Quartermaster
Access
Shop
Mekong
Warehouse
Longstreet
Jackson
Hill
Lee
Corps
Battle
Home
Middle
Jefferson Park
Rocky Springs
Saratoga
Metz
Normandy
Ardennes
Evacuation
Quarters
Siege
Mahone
Blackenridge
Armistead
Walker
Pender
Hickory Hill
Winfield
Stedman
Jamestown
County
Myrick
Roundtop
Windham
Page
Texas
Greenville
Bellevue
Braham
Jefferson
Mercer
Webster
Fillmore
Harrison
Maple
Liberty
Byrne
Darcy
Spruce
Mercury
Mars
Clinton
Early
Apollo
New
Harding
Shore
Scandinavia
Mckeever
Tulip
Collegiate
Hall
Crimson
Franklin
Bank
Henry
Pelham
River
Old
Boulevard
Rolfe
Sapony
Logan
Ridge
Magazine
Boxwood
Miller
East
Old Colony
Burch
Filey
Amelia
Sussex
Old Wythe
Cockrill
Patrick
Cameron
Marks
Wills
Minnpea
Rochelle
Terrace
Clayton
Little Church
Graham
Taylor
Madison
Jefferson
Ramp
Roslyn
Riverview
Royal Oak
Wilson
Stuart
Bristol
Ivey
Pinehurst
Ryan
Danville
Ingram
Elko
Kensington
Floral
Colonial
Hamilton
Westover
Tussing
Walnut
Helen
James
Elko
Roslyn
Ramp
Conduit
Pin Oak
Charles
Kenwick
Old Town
Covington
Pleasant Dale
Yorkshire
Jamestown
Williamsburg
Ellerslie
Holly
Frederick
Greenwood
Yacht Basin
Oakwood
Elmwood
Wildwood
Driftwood
Mount Pleasant
Fine
Flexon
Jennick
Temple Lake
South
Southpark
Temple
Ramp
Roslyn
Whitehill
Wheelers
Industrial
Gibbins
Courthouse
Clingdon
Stage
Nansemond
Mecklenburg
Lakemont
Richmond
Henrico
Ash
Nash
Whitehill
Navajo
Washington
Ramp
Railroad
Quartermaster
Access
Shop
Mekong
Warehouse
Longstreet
Jackson
Hill
Lee
Ramp
Finande
22nd
20th
19th
18th
C
B
25th
27th
Corps
Battle
Home
11th
15th
13th
12th
10th
9th
8th
7th
6th
5th
4th
3rd
2nd
1st
Middle
Jefferson Park
Rocky Springs
Saratoga
Metz
Cheribourg
Normandy
Ardennes
Saint L

complete the trip in one hour. The hours of service for this route may need to be different from weekday to weekend to reflect likely demand. It is suggested that this route provide service in a complementary manner to the current Petersburg/Fort Lee Route and not supplant it, given that the origination is at the Southpark Mall, rather than Petersburg.

  - ***Cost.*** If service on this route were to be operated on a 14-hour span of service Monday through Saturday, with hours that vary according to demand, the annual cost of service would be $230,000. It would be expected that Fort Lee would help fund this route. A vehicle would also be required to be purchased to operate this route. A heavy duty transit bus costs about $300,000 and a body-on-chassis 20-passenger vehicle costs about $60,000. It should be noted that during the alternatives deliberation, representatives from Fort Lee indicated that they would likely be interested in the weekend portion of the route only.

- ***Provide New Demand-Response Service in Prince George County.*** Prince George County currently has the lowest level of transit service among the MPO jurisdictions. The transit needs analysis indicated that some level of transit service was needed in the County, starting with service for people with disabilities, the elderly, and people with low incomes. This proposal involves initiating a demand-response transportation program to begin to meet some of the County's most basic public transportation needs. A "starter" program would likely include two vehicles, operating Monday-Friday, ten hours a day or so. This type of program could be contracted to a private provider or an existing non-profit, in order to take advantage of existing capabilities in the area of scheduling, dispatch, and oversight. It could be modeled after the program that is in operation in Chesterfield County -- Access Chesterfield. If and when this project is pursued, it is recommended that the County apply for a New Freedom grant that could be used to help fund the expenses for the program. Oversight for the program could be provided by an existing County department, or through a regional mobility management program.

  - ***Cost.*** If two vehicles were in operation five days a week, ten hours a day, the total annual operating costs would be about $275,000. Two vehicles would cost about $60,000 each. It should be noted that the costs are based on PAT's operating costs, and may be lower with a local human non-profit or private operator.

Table 5-1 provides a summary of the projects included in the six-year TDP.

Table 5-1: TDP Projects Recommended for Implementation

Project	Purpose	Annual Operating Cost	Capital or Planning Needed	Capital Cost
Constrained Projects for PAT:				
Adjust South Crater Road and Walnut Hill Routes	To provide service to the Southside Regional Medical Center and reduce duplication of service in residential neighborhoods.	Cost Neutral	None	$ -
Reduce Saturday Service to Reflect Demand	To improve productivity and provide a level of service that more closely matches demand.	($34,450)	None	$ -
Update Route Maps and Improve Website	To provide accurate and timely information to the public.	$15,000	None	$ -
Unconstrained Projects for PAT:				
Consider Later Hours of Service on a Partial Route Network	To offer limited evening service to allow PAT riders to use transit to get home from retail jobs, evening classes, and errands.	$197,000	None	$ -
Constrained Projects, Regional:				
Provide Circulator Service in Hopewell	To provide transit service for Hopewell residents so that they can access employment, shopping, medical, and other necessary destinations. The City of Hopewell has applied for CMAQ funding for this project.	$197,000	1 vehicle	$60,000

Table 5-1: TDP Projects Recommended for Implementation

Project	Purpose	Annual Operating Cost	Capital or Planning Needed	Capital Cost
Unconstrained Projects, Regional:				
Provide Additional Service in Colonial Heights	Provide transit service geared to the needs of the residents of Colonial Heights, addressing transit need found through the demographic analysis and the surveys.	$208,000 or cost neutral if supplants the current route	1 vehicle or no vehicles, if supplants existing route	$300,000 or none, if supplants existing route
Provide a Direct Connection between Fort Lee/Hopewell and Southpark Mall	Provide access to shopping and recreational opportunities for Fort Lee residents and their family members and provide access to job opportunities at Fort Lee and the Southpark Mall for Hopewell residents.	$230,000	1 vehicle	Heavy duty: $300,000 Body-on-Chassis: $60,000
Provide New Demand-Response Service in Prince George County	To provide basic mobility for people in Prince George County who currently have no transit service options.	$275,000	2 vehicles	$120,000

ORGANIZATIONAL RECOMMENDATIONS

While the transit needs analysis indicated that regional services are desired, and several previous TDPs in the region have recommended a regional structure for overseeing public transportation in the Tri-Cities, no interest has been expressed by any of the local governments or Fort Lee to change the current organizational structure for the delivery of public transportation in the Tri-Cities.

PAT Management Structure

Although not specifically discussed during the alternatives analysis, there was an alternative that suggested that the City fill the vacant position of Assistant Director of Public Works. This position is still listed on the City's "Listing of Authorized Personnel." It is recommended that this position be filled, particularly if funds become available for service expansions.

Cost Sharing

One of the more visionary goals for the TDP was to develop a regional structure for providing public transportation in the Tri-Cities. If a regional structure had been agreed upon, then a cost-sharing strategy would have been a component of that model. Since a regional structure was not recommended by the TAC, the issue of cost-sharing among jurisdictions for the existing route structure is still unresolved. This section of the plan offers a potential cost-sharing plan which can be used if there is agreement among the jurisdictions to support regional routes.

A potentially equitable manner to share the costs among jurisdictions would be to develop a model that includes both services offered by the City (i.e., total annual vehicle mileage per jurisdiction); and services consumed by area residents (i.e., residency/ridership by jurisdiction). This model would account for the nature of the regional services that are primarily designed for the benefit of City residents, while considering that there is also a benefit to the neighboring jurisdictions. Upon further review, it was decided that vehicle mileage per jurisdiction would be a simpler model to implement. At this time there have been no agreements regarding cost sharing.

As regional services are developed in the future, some sort of cost allocation agreement will likely need to be implemented.

Chapter 6

Capital Improvement Plan

INTRODUCTION

This chapter of the TDP describes the major capital projects (vehicles, facilities, and equipment) needed to support the provision of public transportation in the Tri-Cities for the six-year period covered by this TDP.

VEHICLE REPLACEMENT AND EXPANSION PROGRAM

As described in Chapter 1, PAT owns 27 vehicles; 16 of which are heavy duty transit buses (Gilligs); six of which are paratransit vehicles; and five of which are service or supervisory vehicles. The revenue service vehicles range in model years from 1997 to 2007.

PAT was able to secure American Reinvestment and Recovery Act (ARRA) funding to replace two of the paratransit vehicles. These vehicles should arrive in FY 2011. Replacing the four other 2000 model paratransit vehicles is a priority for the vehicle replacement program, as the recommended useful life for paratransit vans is four to five years. These vehicles are recommended for replacement as soon as is possible. It should be noted that the State's current five-year capital budget calls for one paratransit replacement van in FY 2012 and one in FY 2016, and this TDP calls for four to be replaced in FY 2012.

The supervisory vehicles and the service truck have also exceeded the recommended useful life and are recommended for replacement as soon as is feasible (FY2012, if possible).

PAT's six 1997 Gilligs have also reached their useful life, though the current route network is such that only three of them need to be replaced, while the remaining

three can be retired when they are no longer useful to PAT. The 2007 Gilligs will need to be replaced in 2019, which is beyond the range of this TDP. PAT also has a 2001 Gillig, which will need to be replaced in 2013. The VDRPT Five Year Capital Budget calls for four buses to be replaced in FY 2013, consistent with replacing three of the 1997 Gilligs and the 2001 Gillig.

While it is unclear when funds will be available for expansion of service, the VDRPT Five Year Capital Budget calls for an expansion bus in 2012 and four in 2014. Table 6-1 provides the six-year vehicle replacement and expansion schedule, based on this TDP and the State's Five Year Capital Budget.

OTHER CAPITAL EQUIPMENT

Stimulus Projects

In addition to the two paratransit vans (included for FY 2011 on the vehicle replacement plan), PAT was also awarded the following capital equipment through the ARRA:

- Construction of the multi-modal center -- project change orders resulted in the need for an additional $500,000
- Furnishings for the multi-modal center ($69,000)
- ADP Software ($10,000)
- ADP Hardware -- three computers, copiers, scanners, and printers for the multi-modal center ($10,750)
- Shop equipment -- the replacement of existing floor jack lifts ($120,000)
- Purchase and installation of a generator to support the multi-modal center ($150,000)
- Vehicle locator system ($63,927)
- New communications system ($145,000)
- Signage -- bus stop signs and poles ($5,000)

Table 6-1
Petersburg Area Transit Vehicle Replacement Program

Vehicle Type	Useful Life	Current Fleet	Vehicle Procurements					
			FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Paratransit Vans	5	6	2	4				2
Heavy Duty Transit Buses	12	16			4			
Support Vehicles	5	5	2	3				
Total Vehicles		27	4	7	4	0	0	2

Unconstrained Vehicle Expansion Plan

Vehicle Type	Useful Life	Vehicle Procurements					
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Paratransit Vans	5						
Heavy Duty Transit Buses	12		2	2			
Body on Chassis	5	1		3			
Support Vehicles	5						
Total Vehicles		1	2	5	0	0	0

Note: The unconstrained plan includes vehicles for the Colonial Heights, Fort Lee, and Prince George services.

- Rehabilitation/renovation of some bus stop locations to enhance ADA accessibility, including concrete repairs and curb cuts ($200,000)

Bike Racks for Vehicles

Currently only one of PAT's vehicles is equipped with a bike rack. Equipping the entire fleet would allow transit riders additional flexibility and would serve to expand the reach of transit in the community. Retrofitting the Gilligs is estimated to cost about $1,200 per vehicle, while buying them at the time of bus purchase is about $700 per vehicle. If bike racks were to be purchased for the eight 2007 Gilligs that are not already equipped, the cost is estimated to be $ 9,600. This project is not currently included in VDRPT's Five Year Capital Budget.

FACILITIES

PAT's operating, maintenance, and vehicle storage facility is currently located at 309 Fairgrounds Road, adjacent to the West End Park Fairgrounds. There is space at this facility for expansion and PAT has a need for two additional maintenance bays and a wash bay. The office portion of the facility also needs to be updated, as the administrative staff recently moved from this facility to the new Petersburg Station facility in downtown.

VDPRT's Five Year Capital Budget included $5 million in FY 2012 for maintenance facility renovation.

Chapter 7

Financial Plan

INTRODUCTION

This chapter provides a financial plan for funding existing and proposed transit services in the Tri-Cities for the six-year planning period. The first section proposes a methodology to share some of the transit operating expenses incurred by the City of Petersburg for routes that travel outside the City. The development of some sort of equitable model for assigning costs was an important objective for this TDP. This model is presented, but consensus regarding cost sharing has not yet been established.

The cost allocation model is followed by the proposed operating, vehicle, and capital budgets. It should be noted that there are currently a number of unknown factors that will likely affect transit finance in the Tri-Cities over the course of this planning period, including the reauthorization of SAFETEA-LU, the ability of the region to secure competitive grants, and the future economic condition of the local jurisdictions and the State of Virginia. The budgets were constructed with the information that is currently available, including the VDRPT Statewide Transportation Improvement Program, the VDRPT FY 2011 Five Year Capital Plan, and the City of Petersburg's FY 2011 budget message. Two versions of these budgets have been prepared to reflect both constrained and unconstrained projects.

PROPOSED COST ALLOCATION

As discussed in Chapter 5, a potentially equitable manner to share the costs among jurisdictions would be to calculate the vehicle mileages per jurisdiction, rather than the straight route mileage and allocate the expenses for the regional routes in that manner.

Vehicle Mileage by Jurisdiction

Table 7-1 provides the total annual vehicle mileage per jurisdiction for the current route map and schedule. These totals take into account the number of annual vehicle trips made into particular jurisdictions, rather than simply the route mileage per jurisdiction. The total number of vehicle trips reflects the frequency of service more accurately than route mileage, as there are areas outside the City that are only served by a few trips (i.e., Dinwiddie County).

Table 7-1: Total Annual Vehicle Miles by Jurisdiction

Jurisdiction	Annual Vehicle Miles	% of Total
Chesterfield	12,896	3.5%
Colonial Heights	16,296	4.4%
Dinwiddie	4,284	1.2%
Fort Lee	28,210	7.7%
Hopewell	-	0%
Petersburg & Battlefield	297,352 & 5,642	82.2%
Prince George	4,030	1.1%
Total	368,710	

This model suggests that the local share for operating transit services in the Tri-Cities, assuming the current routes, schedules, and ridership patterns could be split as described in Table 7-1, if each jurisdiction agrees to this type of arrangement. Using the FY 2010 contribution from the City of Petersburg General Fund ($507,407), the model described above would have resulted in the following contributions:

City of Petersburg	$417,089
Chesterfield County/VSU	$ 17,759
City of Colonial Heights	$ 22,326
Dinwiddie County	$ 6,089
Fort Lee	$ 39,070
City of Hopewell	$ 0
Prince George County	$ 5,581

Implementing a model for sharing transit operating costs among jurisdictions served could provide a basis for providing and financing additional regional services in the future. As previously mentioned, there has not yet been agreement on this issue among potential regional partners.

OPERATING EXPENSES AND FUNDING SOURCES

Table 7-2 provides the constrained financial plan for transit operations in the Tri-Cities, including operating, maintenance, and administrative expenses. The six-year plan includes the current base service and adds the Hopewell Circulator, as it has been funded. This financial plan adds half a year of service for the Hopewell Circulator in FY 2011, then a full year of service from FY 2012 through FY 2016. The first three years of service are anticipated to be funded through CMAQ, with the remaining three years funded by the City of Hopewell. It is possible that additional Federal S.5307 funds or State Formula Assistance funds could support this service when the CMAQ funding period is finished, but the amount of S.5307 and Formula Assistance available for the out-years of the plan is currently unknown. Table 7-3 provides a financial plan that includes the unconstrained projects as well.

The service for Fort Lee is included as an unconstrained FY 2012 project, with a proposed 50-50 funding split between the State's New Transit Service Starts program and Fort Lee. The Colonial Heights service is proposed for FY 2013 and CMAQ funding is suggested as a source for this project. If CMAQ funding is available for this project, the grant period is proposed to be 2013-2015. The City of Colonial Heights would then need to fund the route in FY 2016. As with the Hopewell service, there may be additional Federal S.5307 or State Formula Assistance funds available to help fund the service when the CMAQ grant is spent, but these figures are currently unknown.

JARC funding is suggested as the funding source for PAT's evening transit service, which is planned for FY 2013 (unconstrained plan). JARC operating funds are a 50-50 split between federal and local funds. The Prince George demand-response program, programmed for FY 2013, is proposed to be funded in part by a New Freedom grant, which is also a 50-50 split between federal and local funds.

Local funds, as a percentage of the total revenues, appear to rise over the course of the planning period, largely because this plan has not assumed that federal funds will increase and has only assumed inflationary increases for State funds. Pending the reauthorization of SAFETEA-LU, we do not know what the level of federal transit funds will be, though it should be noted that they have generally risen with each transportation funding reauthorization, so the local funding estimates are most likely higher than what will be required.

Table 7-2: Tri-Cities TDP Financial Plan for Operations- Constrained Plan

Projects	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Annual Service Hours						
Constrained Projects:						
PAT Fixed-Route	37,780	37,780	37,780	37,780	37,780	37,780
PAT ADA Paratransit	4,092	4,000	4,000	4,000	4,000	4,000
City of Hopewell Circulator	1,860	3,720	3,720	3,720	3,720	3,720
Total Transit Service Hours	**43,732**	**45,500**	**45,500**	**45,500**	**45,500**	**45,500**
Projected Operating Expenses						
Constrained Projects:						
PAT Operations Expenses-Base Current Service	$ 3,475,170	$ 3,544,673	$ 3,615,567	$ 3,687,878	$ 3,761,636	$ 3,836,868
City of Hopewell Circulator	$ 98,500	$ 197,000	$ 200,940	$ 204,959	$ 209,058	$ 213,239
Total Projected Operating Expenses- Constrained Only	**$ 3,573,670**	**$ 3,741,673**	**$ 3,816,507**	**$ 3,892,837**	**$ 3,970,694**	**$ 4,050,108**

Table 7-2: Tri-Cities TDP Financial Plan for Operations- Constrained Plan (continued)

Anticipated Funding Sources	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Federal						
Constrained:						
FTA S. 5307	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585
CMAQ-Hopewell Circulator	$ 98,500	$ 197,000	$ 200,940	$ 98,500	$ -	$ -
State						
Formula Assistance	$ 381,369	$ 388,996	$ 396,776	$ 404,712	$ 412,806	$ 421,062
Farebox and other Local Revenues (PAT)	$ 848,539	$ 890,966	$ 935,514	$ 982,290	$ 1,031,404	$ 1,082,975
Local Contributions						
City of Petersburg	$ 507,407	$ 527,126	$ 545,691	$ 563,291	$ 579,840	$ 595,247
City of Hopewell	$ -	$ -	$ -	$ 106,459	$ 209,058	$ 213,239
Total Local	$ 507,407	$ 527,126	$ 545,691	$ 669,750	$ 788,898	$ 808,486
Total Projected Operating Revenues- Constrained	**$ 3,573,400**	**$ 3,741,673**	**$ 3,816,507**	**$ 3,892,837**	**$ 3,970,694**	**$ 4,050,108**

Notes:

(1) Does not escalate Federal 5307 funds, as reauthorization is pending. This is why the local match increases over the six-year period.
(2) Includes 2% inflation each year.

Table 7-3: Tri-Cities TDP Financial Plan for Operations-Unconstrained Plan

Projects	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Annual Service Hours- Unconstrained						
PAT Fixed-Route	37,780	37,780	41,500	41,500	41,500	41,500
PAT ADA Paratransit	4,092	4,000	5,000	5,000	5,000	5,000
City of Hopewell Circulator	1,860	3,720	3,720	3,720	3,720	3,720
Fort Lee Connection	-	4,340	4,340	4,340	4,340	4,340
Colonial Heights Service	-	-	3,875	3,875	3,875	3,875
Demand-Response Service-Prince George County	-	-	5,100	5,100	5,100	5,100
Total Transit Service Hours	**43,732**	**49,840**	**63,535**	**63,535**	**63,535**	**63,535**
Projected Operating Expenses- Unconstrained						
PAT Operations Expenses-Base Current Service	$ 3,475,170	$ 3,544,673	$ 3,615,567	$ 3,687,878	$ 3,761,636	$ 3,836,868
City of Hopewell Circulator	$ 98,500	$ 197,000	$ 200,940	$ 204,959	$ 209,058	$ 213,239
Transit Manager Salary and Fringe		$ 84,500	$ 87,035	$ 89,646	$ 92,335	$ 95,105
Limited Evening Service for PAT	$ -	$ -	$ 197,000	$ 200,940	$ 204,959	$ 209,058
Additional ADA Paratransit to Support Colonial Heights Service	$ -	$ -	$ 53,000	$ 54,060	$ 55,141	$ 56,244
Fort Lee Connection	$ -	$ 230,000	$ 234,600	$ 239,292	$ 244,078	$ 248,959
Colonial Heights Service	$ -	$ -	$ 209,250	$ 213,435	$ 217,704	$ 222,058
Demand-Response Service-Prince George County	$ -	$ -	$ 275,400	$ 280,908	$ 286,526	$ 292,257
Total Projected Operating Expenses	**$ 3,573,670**	**$ 4,056,173**	**$ 4,872,792**	**$ 4,971,118**	**$ 5,071,437**	**$ 5,173,789**

Notes: Proposed implementation years are estimated. Actual implementation is dependent upon funding availability.

Table 7-3: Tri-Cities TDP Financial Plan for Operations-Unconstrained (continued)

Anticipated Funding Sources	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Federal						
FTA S. 5307	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585	$ 1,737,585
CMAQ-Hopewell Circulator	$ 98,500	$ 197,000	$ 200,940	$ 98,500	$ -	$ -
CMAQ- Colonial Heights	$ -	$ -	$ 209,250	$ 213,435	$ 217,704	$ -
JARC-Evening Service	$ -	$ -	$ 98,500	$ 100,470	$ 102,479	$ 104,529
New Freedom-Prince George Service			$ 137,700	$ 140,454	$ 143,263	$ 146,128
State						
Formula Assistance	$ 381,369	$ 388,996	$ 396,776	$ 404,712	$ 412,806	$ 421,062
New Transit Service Starts-Fort Lee	$ -	$ 115,000	$ 117,300	$ 119,646	$ -	$ -
Farebox and other Local Revenues (PAT)	$ 848,539	$ 890,966	$ 935,514	$ 982,290	$ 1,031,404	$ 1,082,975
Local Contributions						
City of Petersburg	$ 507,407	$ 611,626	$ 784,226	$ 807,467	$ 829,796	$ 851,126
City of Hopewell	$ -	$ -	$ -	$ 106,459	$ 209,058	$ 213,239
City of Colonial Heights	$ -	$ -	$ -	$ -	$ -	$ 222,058
Prince George County	$ -	$ -	$ 137,700	$ 140,454	$ 143,263	$ 146,128
Chesterfield County	$ -	$ -	$ -	$ -	$ -	$ -
Dinwiddie County	$ -	$ -	$ -	$ -	$ -	$ -
Fort Lee	$ -	$ 115,000	$ 117,300	$ 119,646	$ 244,078	$ 248,959
Total Local	$ 507,407	$ 726,626	$ 1,039,226	$ 1,174,026	$ 1,426,195	$ 1,681,510
Total Projected Operating Revenues-Unconstrained	**$ 3,573,400**	**$ 4,056,173**	**$ 4,872,792**	**$ 4,971,118**	**$ 5,071,437**	**$ 5,173,789**

Notes:

(1) Proposes using CMAQ , the State's New Transit Service Starts Program, JARC, and New Freedom to initiate new services.

(2) Assigns local match expenses to the jurisdiction where service is proposed to be provided.

(3) Does not escalate Federal 5307 funds, as reauthorization is pending. This is why the local match increases over the six-year period.

(4) Includes 2% inflation each year.

VEHICLE PURCHASE EXPENSES AND FUNDING SOURCES

Table 7-4 offers the constrained financial plan for vehicle replacement and expansion over the six-year period. The funding split is generally assumed to be 80% federal, 10% state, and 10% local. The only exceptions to these are the two ARRA vehicles (FY 2011, 100% federal) and the proposed CMAQ vehicles (FY 2011 and FY 2013, 100% federal). The plan includes a total of 17 replacement vehicles and one expansion vehicle.

Table 7-5 is the unconstrained financial plan for vehicle replacement and expansion. This plan includes eight expansion vehicles.

FACILITY IMPROVEMENT EXPENSES AND FUNDING SOURCES

The constrained financial plan for facilities, equipment, and other capital is provided in Table 7-6. These expenses are also assumed to be funded with federal (80%), state (10%), and local (10%) funds. Table 7-7 provides the unconstrained financial plan for facilities, Equipment, and Other Capital.

Table 7-4: Tri-Cities TDP Financial Plan for Vehicle Replacement and Expansion

Constrained Plan

Number of Vehicles	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Replacement	4	7	4	0	0	2
Expansion	1			0	0	0
Total Vehicles	5	7	4	0	0	2
Vehicle Costs						
Replacement	$ 160,000	$ 295,000	$ 1,200,000	$ -	$ -	$ 130,000
Expansion	$ 65,000			$ -	$ -	$ -
Total Projected Vehicle Costs	$ 225,000	$ 295,000	$ 1,200,000	$ -	$ -	$ 130,000
Anticipated Funding Sources						
Federal (1)	$ 215,000	$ 236,000	$ 960,000	$ -	$ -	$ 104,000
State	$ 5,000	$ 29,500	$ 120,000	$ -	$ -	$ 13,000
Local	$ 5,000	$ 29,500	$ 120,000	$ -	$ -	$ 13,000
Total Vehicle Revenues	$ 225,000	$ 295,000	$ 1,200,000	$ -	$ -	$ 130,000

(1) In FY 2011, it is anticipated that two of the replacement vehicles will be funded with ARRA funds and the expansion vehicle will be funded with CMAQ funds. funds.
Both ARRA and CMAQ are 100% federal share.

Table 7-5: Tri-Cities TDP Financial Plan for Vehicle Replacement and Expansion

Unconstrained Plan

Number of Vehicles	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Replacement	4	7	4	0	0	2
Expansion	1	2	5	0	0	0
Total Vehicles	5	9	9	0	0	2
Vehicle Costs						
Replacement	$ 160,000	$ 295,000	$ 1,200,000	$ -	$ -	$ 130,000
Expansion	$ 65,000	$ 600,000	$ 795,000	$ -	$ -	$ -
Total Projected Vehicle Costs	$ 225,000	$ 895,000	$ 1,995,000	$ -	$ -	$ 130,000
Anticipated Funding Sources						
Federal (1)	$ 215,000	$ 716,000	$ 1,716,000	$ -	$ -	$ 104,000
State	$ 5,000	$ 89,500	$ 139,500	$ -	$ -	$ 13,000
Local	$ 5,000	$ 89,500	$ 139,500	$ -	$ -	$ 13,000
Total Vehicle Revenues	$ 225,000	$ 895,000	$ 1,995,000	$ -	$ -	$ 130,000

(1) In FY 2011, it is anticipated that two of the replacement vehicles will be funded with ARRA funds and the expansion vehicle will be funded with CMAQ funds. In FY 2013 it is anticipated that two of the expansion vehicles will be funded with CMAQ funds. Both ARRA and CMAQ are 100% federal share.

Table 7-6: Tri-Cities TDP Financial Plan for Facilities, Equipment, and Other Capital

Constrained

Projects	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Bike Racks for Vehicles		$ 19,500				
Transit Enhancements	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
Security Cameras for Vehicles		$ 20,000				
Renovation of Maintenance Facility		$ 5,000,000				
Other Capital Projects	$ 250,000	$ 358,000	$ 228,000	$ 200,000	$ 200,000	$ 200,000
Total Projected Non-Vehicle Capital Expenses	$ 270,000	$ 5,417,500	$ 248,000	$ 220,000	$ 220,000	$ 220,000
Anticipated Funding Sources						
Federal	$ 216,000	$ 4,334,000	$ 198,400	$ 176,000	$ 176,000	$ 176,000
State	$ 27,000	$ 541,750	$ 24,800	$ 22,000	$ 22,000	$ 22,000
Local	$ 27,000	$ 541,750	$ 24,800	$ 22,000	$ 22,000	$ 22,000
Total Projected Non-Vehicle Capital Revenue	$ 270,000	$ 5,417,500	$ 248,000	$ 220,000	$ 220,000	$ 220,000

Table 7-7: Tri-Cities TDP Financial Plan for Facilities, Equipment, and Other Capital

Unconstrained Plan

Projects	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Bike Racks for Vehicles		$ 19,500				
Transit Enhancements	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
Shelters for New Service Areas		$ 25,000	$ 25,000			
Security Cameras for Vehicles		$ 20,000				
Renovation of Maintenance Facility		$ 5,000,000				
Other Capital Projects	$ 250,000	$ 358,000	$ 228,000	$ 200,000	$ 200,000	$ 200,000
Total Projected Non-Vehicle Capital Expenses	$ 270,000	$ 5,442,500	$ 273,000	$ 220,000	$ 220,000	$ 220,000
Anticipated Funding Sources						
Federal	$ 216,000	$ 4,354,000	$ 218,400	$ 176,000	$ 176,000	$ 176,000
State	$ 27,000	$ 544,250	$ 27,300	$ 22,000	$ 22,000	$ 22,000
Local	$ 27,000	$ 544,250	$ 27,300	$ 22,000	$ 22,000	$ 22,000
Total Projected Non-Vehicle Capital Revenue	$ 270,000	$ 5,442,500	$ 273,000	$ 220,000	$ 220,000	$ 220,000

Chapter 8

TDP Monitoring and Evaluation

INTRODUCTION

The Tri-Cities Area TDP, developed over a 12-month period and guided by the MPO's Technical Advisory Committee, has included the following tasks:

- The development of goals, objectives, and service standards;
- Detailed documentation and analysis of current public transportation services, with a focus on the services provided by PAT, including boarding and alighting counts;
- A peer review showing the service and financial characteristics of transit programs similar in scope to PAT;
- A transit needs analysis, including demographic analysis, land use analysis, a review of relevant planning documents, public opinion surveys, and rider surveys;
- The development of service and organizational alternatives;
- The development of a cost allocation model to be used as a tool to share transit expenses among the jurisdictions that enjoy PAT services;
- The development of recommendations for transit improvements for inclusion in the TDP, with improvements tentatively identified by year; and
- Funding requirements and potential funding sources for recommended transit improvements in the region.

While a consensus was not reached concerning the regional cost allocation approach during this TDP process, it is hoped that this document will help to solidify a future financial relationship among the jurisdictions where transit services are provided.

The current economic downturn has also clouded the picture for transit service expansions in the near-term, other than those that can be funded through federal and state grants that offer 100% or close to 100% funding. Expansions have been included in the plan and they are attached to particular years, but these projects may slip to future years if the economy does not improve or if grants are not secured for implementation. This TDP may need to be updated during the six-year planning period to reflect funding availability.

COORDINATION WITH OTHER PLANS AND PROGRAMS

The Tri-Cities Area Year 2031 Transportation Plan was completed in June 2008. The public transportation section of the plan does not currently include major transit service expansions, other than the opening of the Petersburg Station. Maintaining current service levels and ensuring the timely replacement of vehicles and equipment are the focus of the public transportation portion of the 2031 Transportation Plan. Amendments to the Plan will be needed so that projects recommended for implementation within this TDP can be included and potentially funded with CMAQ funds.

Transit services consistent with those recommended within this TDP are included in the Fort Lee Growth Management Plan (2008), including a recommendation to form a partnership between PAT and Fort Lee to develop additional service to the base.

Transit service expansion in the Tri-Cities is also consistent with the 2008 Richmond/Petersburg Coordinated Human Service Mobility Plan, which was developed to guide funding decisions for the Federal S.5310, S.5316, and S.5317 funding programs.

PAT is represented by the Mayor of Petersburg on the MPO's Policy Committee and is also represented on the MPO's Technical Advisory Committee by the City of Petersburg's Director of Public Works, whose responsibilities include oversight of PAT.

SERVICE PERFORMANCE MONITORING

A number of service standards were developed for PAT (Chapter 2) for this TDP. The purpose of including these standards was to develop some objective measurements of performance that PAT could use to monitor transit services in the future and make objective, performance-based service planning decisions. It is recommended that PAT monitor service performance on a monthly basis.

ANNUAL TDP MONITORING

For this TDP it is particularly important that PAT monitor the progress each fiscal year. There are projects included for implementation that are dependent upon grants and these grants must be written by either PAT or by the affected jurisdictions. Projects may also need to shift from one year to the next if funding is not available. Alternatively, if the reauthorization of the federal transportation funding program is more generous than SAFETEA-LU, projects could potentially be implemented ahead of schedule or additional projects could be added to the TDP.

PAT should also monitor the operating statistics for current and new services to ensure that the performance is consistent with the service standards included in this TDP.

APPENDIX A

General Comments

General Comments from Rider Survey

#11 is necessary, all of your sites need attention immediately
Bad bus drivers
Be more courteous
Better and longer hours with more convenient stops
Bike racks
Blandford is too long to go roundtrip
Blandford line waits are too long
Bus needs to run on Sundays
Buses are fun.
Buses at half hour intervals
Buses need to run 24/7 if possible to help those who don't drive but who work on holidays and sundays.
buses on 30 min intervals
Buses should go to the hospital
Change back route to Washington Street to every 30mins
Change bus to Washington St. every 30 minutes
Change without citizen input should never be an option!
Combining stops is bad
Does not make sense to combine with central state. Should not have taken bus from central state people need to get there at all different hours
Drivers and their attitude
Earlier buses on Saturday
earlier service
Earlier service
everything is ok except the bus driver
expand hours of service
Expand to southside region
For working purposes bus should run at least till 11pm
Fort Lee South
Good job
Good!
Halifax bus should pick up every 30min
Having a stop at SRMC
Hope it could run later hours
Hopewell
I find it to be very satisfying for me as well as others I know who ride the buses.
I like riding the bus.
I like the service I get. Keep it up.
I love and appreciate the PAT bus service and most of all the employees of PAT.
I ride the bus because it is economical and gets me to work. Buses on Sundays would improve help a lot.
I think if the Southpark Mall bus was to go down the boulevard you will make more money
I think the bus routes should be cut to 30 min and have more buses to go to each destination
I think there should be seat belts for children under 12
I wish Halifax would run every half hour not every hour

I wish it ran later than 6pm. I wish it ran on Sundays
I work helping people become employed and many of them are restricted when and where they work because of bus schedules
If the busses would wait an extra 5 min on Saturday coming from Crater Rd. at 6pm
I'm old and I like to ride the bus.
Is fine! 2 me
It suits my current purposes.
It would be nice if you could use your phone like on Richmond city buses.
It's good to have transportation so I can get to work.
Late buses are bad
Late buses are bad.
Later hours, service 7 days a week.
later service hours, 10pm
longer hours
Longer hours
Longer hours
Longer hours and wider service area
Look forward to seeing where all this information will lead to.
More buses
more buses and longer service hours
More frequent routes. Go to Hopewell and Cavalier Square. Boulevard in Colonial Heights
More frequent service
more frequent service, downtown routes shouldn't go through Ft. Lee
More new buses
need benchs at more Bus stops, need bicycle rack on Buses, need more Buses, need longer hours (Jobs) and 7 days a week, stop combining routes
Need hourly bus to Central State
Need more buses, more routes, longer hours, Sunday buses. Stop combining routes
need more buses, need more routes, need to run buses longer hours to find and keep employment
Need ramp for people with walkers and wheelchairs
Need to separate Ft. Lee and Blandford
nothing at this time
open transportation up to more areas
Pick up at Central State before 5:30pm
Please add bicycle rack to front of buses for bike riders
Please expand service hours during the weekdays as well as weekends. Expand at least to 11pm
Please have built-in seatbelts
Public Transportation is really needed for the city all over to help the people.
Put the 6:45 run back on Washington, St.
Put the 6:45 run back on Washington, St.
Rude drives, Sunday service, extended hours
Satisfactory
Seat belts for small children
service everyday
So far, so good.
Some drivers are too old.
some of the drivers need to adjust attitude

Step your game up.
Sunday and holiday service, longer hours, better on time performance
Sunday Service
Sunday service
Sunday service, not everyone has a car
The Blandford bus needs to be back on the 30 min route
The Blandford need to go back to it's regular route
The bus is ok with me.
The bus should come more frequently in the central state area
The Ettrick bus should go down River Rd. because a lot of people don't have cars back in those sub-divisions.
The lady that drives the Walnut Hill bus does a very wonderful job and speaks very clearly.
The time periods of waiting to get on another bus when its in the same city
The Washington St transit between 4pm and 5pm. I have to wait 60-45 mins, unsatisfactory
There should be service between Hopewell and Cavalier Sq. and Fort Lee
They always leave people when at the PAT stop
Do a very good job
Very convenient for me. There is no place I can't get to that the PAT can't take me.
Waits between transfers are too long
Well we are the only place I know that prohibits cell phone conversation. I feel as adults we have that right and if we disrespect our neighbor that is for disciplinary actions. As if talking to loud. But who wants to expose their business. This rule should be changed because we can be responsible adults
Why can't bus go in different areas of Fort Lee?
Why can't we use cell phones quietly?

APPENDIX B

Title VI Report

CITY OF PETERSBURG
PETERSBURG AREA TRANSIT
309 FAIRGROUNDS ROAD, PETERSBURG, VIRGINIA 23803
PHONE (804) 733-2413 - FAX (804) 733-6439

March 20, 2007

Ms. Deborah L. Haines
FTA Regional Civil Rights Officer
1760 Market Street
Suite 500
Philadelphia, Pennsylvania 19103-4124

Dear Ms. Haines:

This letter is to provide your office with updated information concerning the Title VI general reporting requirements as outlined within the provisions of FTA Circular 4702.1 – Title VI Program Guidelines for Federal Transit Administration Recipients (May 8, 1988). The Title VI documentation required for the City of Petersburg – Petersburg Area Transit is as follows:

(1) There is no active lawsuits or complaints naming the City of Petersburg – Petersburg Area Transit of any allege discrimination on the basis of race, color or national origin with the respect to service or other transit benefits.

(2) A description of all financial currently provided by Federal agencies to the City of Petersburg – Petersburg Area Transit is limited to the following FTA Section 5307 grants for fiscal years 2003 thru 2006.
VA-03-0104-00 – Multimodal Transit Center
VA-90-X212-00 – Operating and Capital Assistance
VA-90-X223-00 – Operating and Capital Assistance
VA-90-X233-00 – Operating and Capital Assistance
VA-90-X261-00 – Operating and Capital Assistance
VA-90-X270 -00 – Construction /Row-Transit Center

(3) In the last three years, no civil rights compliance review activities have been conducted that involved the City of Petersburg – Petersburg Area Transit.

(4) For a copy of the signed FTA Civil Rights Assurance, see the attachment enclosed with this letter.

(5) A copy of a signed standard DOT Title Assurance will follow receipt of this letter.

Sincerely,

Michael D. Biddell /sed

Michael D. Biddell
Acting Director of Public Works

Appendix A

FEDERAL TRANSIT ADMINISTRATION CIVIL RIGHTS ASSURANCE

THE CITY OF PETERSBURG – PETERSBURG AREA TRANSIT HEREBY CERTIFIES THAT, as a condition of receiving federal financial assistance under the FEDERAL TRANSIT ACT OF 1964, as amended, it will ensure that:

1. No person on the basis of race, color or national origin is to be subjected to discrimination in the level and quality of transportation services and transit-related benefits.

2. The City of Petersburg – Petersburg Area Transit will comply, maintain and submit in a timely manner Title VI information required by FTA Circular 4702.1 and in compliance with the Department of Transportation's Title VI regulation, 49 CFR Part 21.9.

3. The City of Petersburg – Petersburg Area Transit will make it known to the public that those persons alleging discrimination on the basis of race, color or national origin as it relates to the provision of transportation services and transit-related benefits may file a complaint with the Federal Transit Administration and/or the U. S. Department of Transportation.

The person or persons whose signature appears below are authorized to sign this assurance on behalf of the grant application or recipient.

B. David Canada, City Manager
Name and Title of Authorized Officer

Signature of Authorized Officer

03/07/07
Date

APPENDIX B

DEPARTMENT OF TRANSPORTATION TITLE VI ASSURANCE

The City of Petersburg, Virginia (hereafter referred to as the "Recipient" HEREBY AGREES THAT as a condition to receiving any Federal financial assistance from the Department of Transportation will comply with the Title VI of the Civil Rights Act of 1964, 78 Statute. 252, 42 U. S. C. 2000d hereinafter reference as the Act), and all requirements imposed by or pursuant to Title 40, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to the Regulations) and other pertinent directives, to the end and that in accordance with the Act of 1964, Regulations, and other pertinent directives, no person in the United States shall, on the grounds of race, color, or national origin, be excluded upon participation in, be denied the benefits of, or be otherwise subjected to discrimination under only program or action for which the Recipient receives Federal financial assistance from the Department of Transportation, including The Federal Transit Administration, and HEREBY GIVES ASSURANCE THAT it will promptly take any measures necessary to effectuate this agreement. This assurance is required by subsection 21.7 (a) of the Regulations.

More specifically and without limiting the above general assurance, the Recipient hereby gives the following specific assurances with respect to its Section 9 Program.

1. That the Recipient agrees that each "program" and each facility" as defined in sub 21.23 (a) and 21.23 (b) of the Regulations, will be (with regard to a "program") conducted, or willing with regard to a "Facility") operated in compliance with all requires imposed by, or pursuant to, the regulations.

2. That the Recipient shall insert the following notification in all solicitations for bids for work or material subject to the Regulations and made in connection will all Section 9 Programs and, in adapted firm in all proposals for negotiated agreements:

   > The City of Petersburg, Virginia in accordance With the title VI of the Civil Rights Act of 1964, 78 Statute. 252 U. S. C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, nondiscrimination in Federal-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into Pursuant to this advertisement, minority business enterprises will be afforded the opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

3. That the Recipient shall insert the clauses of Appendix A of this assurance in every aspect subject to this Act and the Regulations.

4. That the Recipient shall insert the clauses of Appendix B of this assurance, as a covenant running with the land, in any deed from the United States affecting a transfer of real property, structure or improvements thereon, or interest therein.

5. That where the Recipient receives Federal financial assistance to construct a facility, part of a facility, the assurance shall extend to the entire facility and facilities operated in connection therein.

6. That where the Recipient received Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the assurance shall extend to rights to space on, over, or under such property.

7. That the Recipient shall include the appropriate clauses set forth in Appendix C of this assurance, as a covenant running with the land, in any future deeds, leases, permits, licenses, and similar agreements enter into by the Recipient with other parties: (a) for the subsequent transfer of real property acquired or improved under the Section 9 Program; and (b) for the construction or use of or access to space on, over, or under real property acquired, or improved under the Section 9 Program.

8. That this assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property or interest therein or structures or improvements thereon, in which case the assurance obligates the Recipient or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or (b) the period during which the Recipient retains ownership or possession of the property.

9. The Recipient shall provide for such methods of administration for program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, subgrantees, contractors, subcontractors, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Act, the Regulations and this assurance.

10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Act, the Regulations and this assurance.

THIS ASSURANCE is given in consideration of the for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Recipient by the Department of Transportation under the Section 9 Program and is binding on it, other recipients, subgrantees, contractors, subcontractors, transferees, successors in interest and other participates in the Section 9 Program. The person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Recipient.

DATED: December 12, 2006

City of Petersburg, Virginia
(Name of Recipient)

By _____
(Signature of Authorized Official)

attachments

PROGRAM – SPECIFIC REQUIREMENTS

DEMOGRAPHICS

Included in this submission, are maps showing the major streets and activity centers or generators of the Petersburg Area Transit. These maps, from the Census data of 2000 have been overlaid with the current transit route maps showing service to these areas. These overlays include minority tract districts, employment concentrations, percentage of zero vehicle households, and poverty level. For the City of Petersburg, transit service is provided within ¼ mile to approximately 95% of the households.

Our service area retains the core area of 2002; however, service has expanded to neighboring jurisdictions providing access to significant retail, employment and training opportunities. Included in the route expansion are service to the Crossing Shopping Center located in the City of Hopewell, South Park Mall located in the City of Colonial Heights and service to Dinwiddie County for employees to the Department of Behavior Management, Southside Virginia Training Center and Central State Hospital. In addition, this last route has added additional service to Westgate Shopping Center also located in Dinwiddie County.

The population for the City of Petersburg continues to have a high proportion of minorities. The 2000 census showed that the African American population for the city at 79%. Additionally, the census data showed 20% of households have no access to a vehicle and 40% have access to only one vehicle.

It is easily seen that mass transit is essential component for transportation for the City of Petersburg. The expansion efforts over the recent past have provided for increase employment opportunities, access to medical facilities, training and education.

SERVICE STANDARDS AND POLICIES

VEHICLE LOAD

The Vehicle Load information is shown below. This load factor analysis has been updated showing all routes and trips in the 8:00 a.m. – 9:00 a.m. time period. Included on the list is the number of trips provided during that one-hour period, seats available, passengers carried and load factor.

Bus Route	Minority	Number of Trips	Number of Seats	Number of Passengers	Load Factor
Washington Street	30	2	72	31	.43
Halifax Street	23	1	36	23	.64
Lee Avenue	19	2	72	20	.27
Virginia Avenue	5	1	36	6	.17
Plaza	6	1	36	8	.22
Ettrick	6	1	36	6	.17
Blandford	25	2	72	25	.34
Walnut Hill	18	1	27	22	.81
South Crater Road	3	1	36	5	.14
Hopewell	8	1	36	10	.27
South Park Mall	26	1	36	30	.83
Central State/SVTC	6	1	36	6	.17

VEHICLE ASSIGNMENT

The Vehicle Assignment Sheet listed below lists all routes, number of buses serving these routes during both peak and non-peak hours, vehicle ages and amenities on each. Morning peak service occurs prior to 9:00 a.m. and from 3:30 p.m. to the close of service at approximately 6:30 p.m. No night service is provided.

Bus Route	Minority Service	Time	Number of Vehicles	Average Age	Anemities
Washington Street	N/A	12	1	10	AC/Radio/WC
Halifax Street	N/A	12	1	9	AC/Radio/WC
Lee Avenue	N/A	12	1	7	AC/Radio/WC
Virginia Avenue	N/A	12	1	9	AC/Radio/WC
Plaza	N/A	12	1	15	AC/Radio/WC
Ettrick	N/A	12	1	9	AC/Radio/WC
Blandford	N/A	12	1	10	AC/Radio/WC
Walnut Hill	N/A	12	1	9	AC/Radio/WC
South Crater Road	N/A	12	1	9	AC/Radio/WC
South Park Mall	N/A	12	1	9	AC/Radio/WC
Central State/SVTC	N/A	12	1	9	AC/Radio/WC

Petersburg Area Transit's fleet consists of thirteen (13) buses to include - one (1) 1992 Flxible – 35 feet, two (2) 1997 Gilligs – 35 feet, one (1) 2001 Gillig – 29 feet, low floor, eight (8) 1997 Gilligs – 35 feet and one (1) Ford mini-bus. All vehicles move between all routes terminating downtown. All buses serve all areas and realize very few if any restrictions.

VEHICLE HEADWAYS

The hours of operation, route numbers and miles are attached as exhibits. There are different sheets for days of service on Friday and Saturday.

TRANSIT AMENITIES

Over the past several years, PAT has replaced older shelters with newer shelter and has added 12 new shelter locations with a goal of having 50 stop locations with shelters. Petersburg Area Transit had contracted with a private firm to install many more units within its service area. These are located in strategic locations throughout the system. New bus stop signs have also been installed at every stop throughout all routes.

Public bus route schedules are available throughout the City in various racks in public places and on each bus. Riders who don't possess a printed schedule may obtain information by calling the PAT office from 8:30 a.m. until 5:00 p.m., Monday thru Friday. For persons with disabilities or the hearing impaired, the Virginia Relay Center may be reached @ 1.800.828.1120, providing information through a Telecommunication Device for the Deaf (TDD). Additionally, all schedules and routes are listed on the city's website at petersburg-va.org

TRANSIT ACCESS

Petersburg Area Transit operates within the Tri-Cities area serving a population of 31,300 people. Over the past several years, Petersburg Area Transit initiated service to various new locations to include Fort Lee, the Crossings Shopping Center in Hopewell, South Park Mall in Colonial Heights and Central State Hospital and SVTC in Dinwiddie County. There are currently no plans for additional expansion, though service extension hours of operations are being reviewed There are no service restrictions within the area of operation for the transit system. In addition to the fixed route service provided by the transit system, demand response provides service throughout the same service area and within a ¼ mile of the fixed route.

OTHER AREAS OF TITLE VI CONSIDERATION

CHANGES IN SERVICE FEATURES

The City of Petersburg – Petersburg Area Transit service and fares currently established are expected to be maintained into the foreseeable future, based on the premise that funding will continue at its current level. If, in the future, other reductions occur, changes will be inevitable. Earlier this year, City Council approved a reduction in the fare structure for elderly and handicap to all day in lieu of the off peak hour service requirement.

INFORMATION DISSEMINATION

Public hearings have and will always be provided when any change in the fare structure or routes is considered. Such public hearings are advertised in newspaper legal notices, the city's website, posted at the clerk of council's information board and in-bus announcements. Even with public hearings and various announcements, further comments can be made at regular City Council meetings. The public is invited to attend.

MINORITY REPRESENTATION ON DECISION MAKING BODIES

Petersburg Area Transit's is operated by the governing agency of the City of Petersburg through its City Council. The city operates under a City Manager form of government whom is appointed by City Council. The seven City Council members include representation from each of the seven wards with the Mayor and Vice-Mayor selected among council members. City Council currently is represented by seven members with five (5) being minorities. City Council meetings do allow public participation from anyone who desires to speak on any business involving the City.

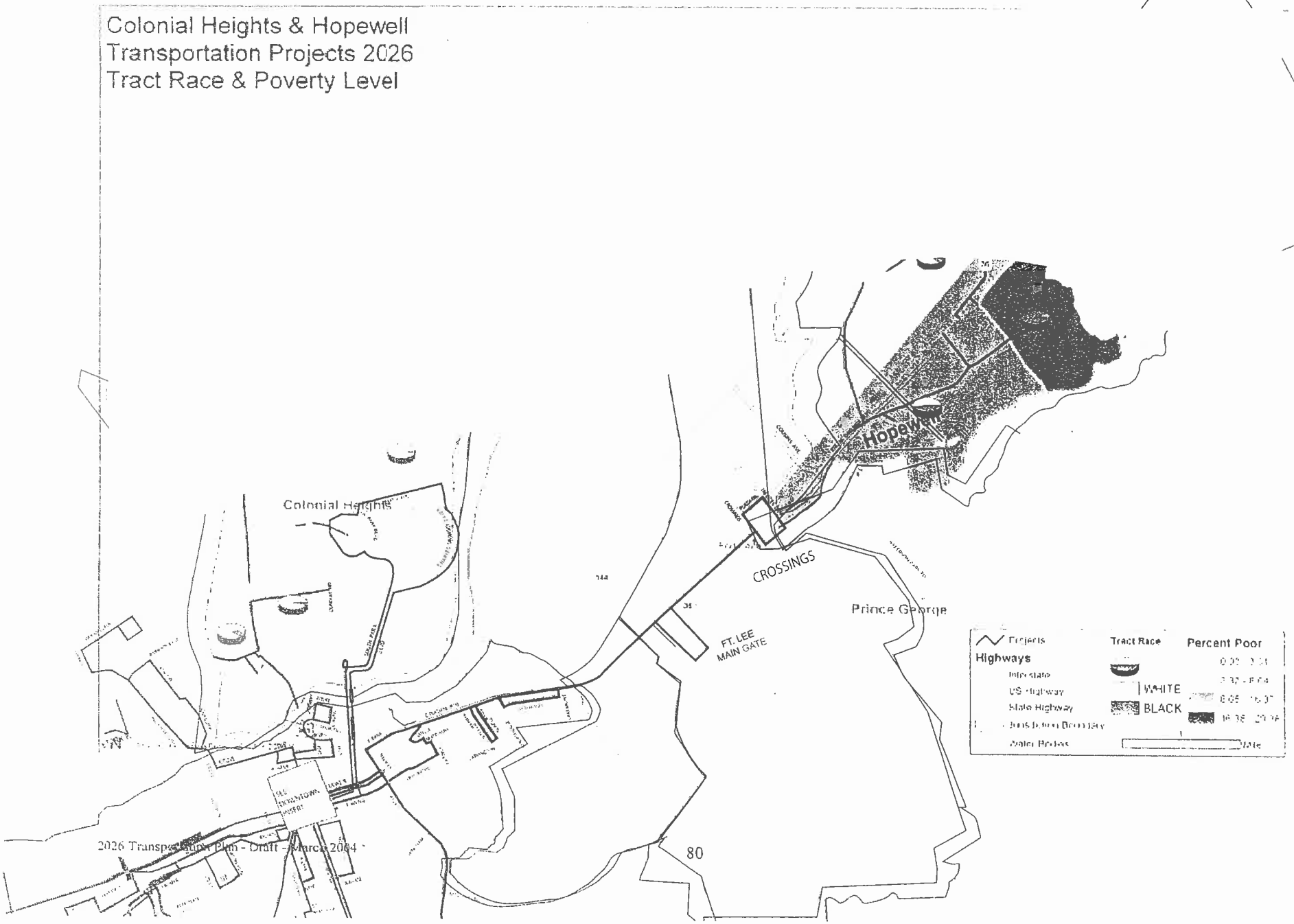
MULTINGUAL FACILITIES

The City of Petersburg does not have a multilingual facility dedicated to translation, however several offices including social services, police and fire and rescue offer multilingual personnel to assist when issues arise.

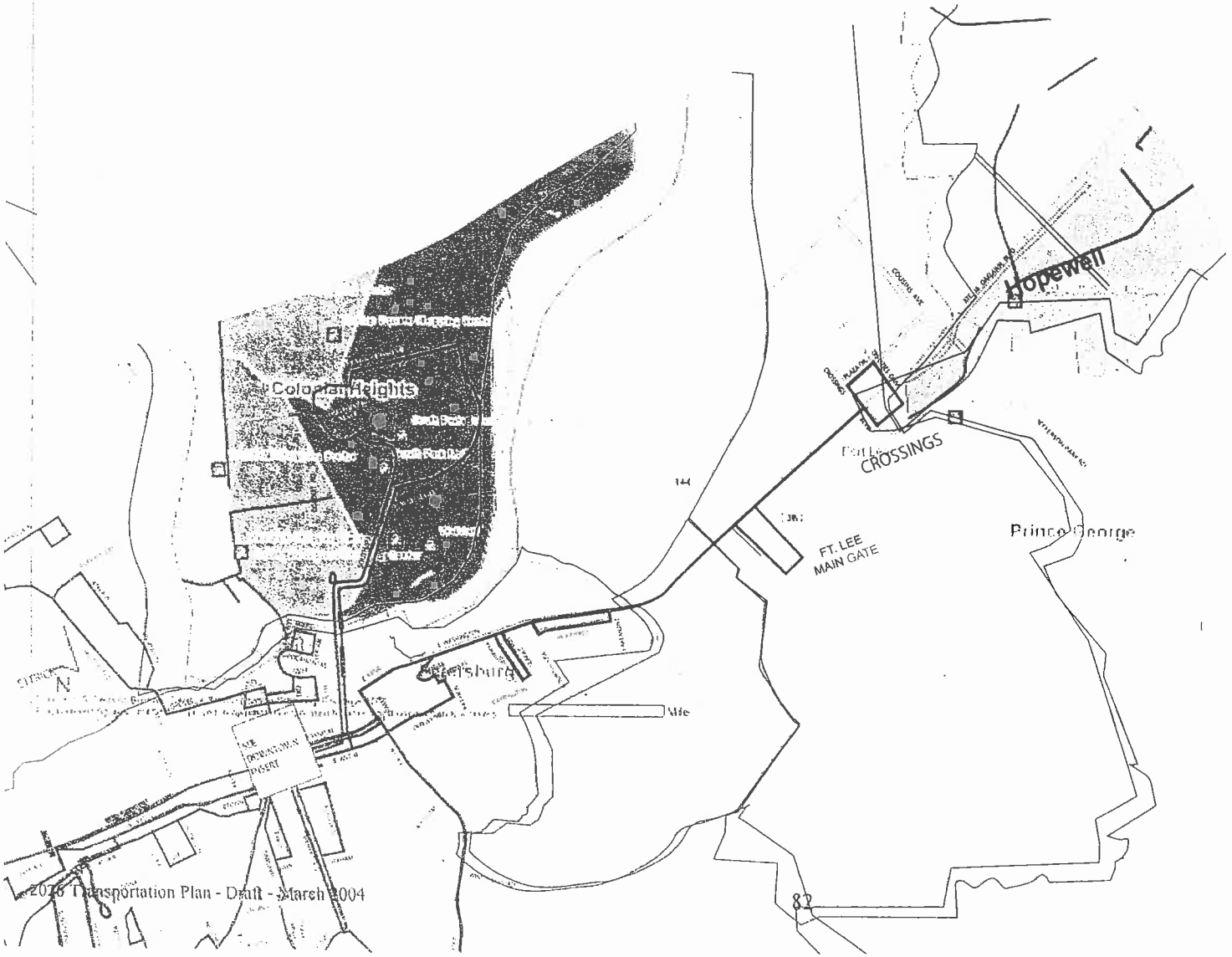
MONITERING PROCEDURES

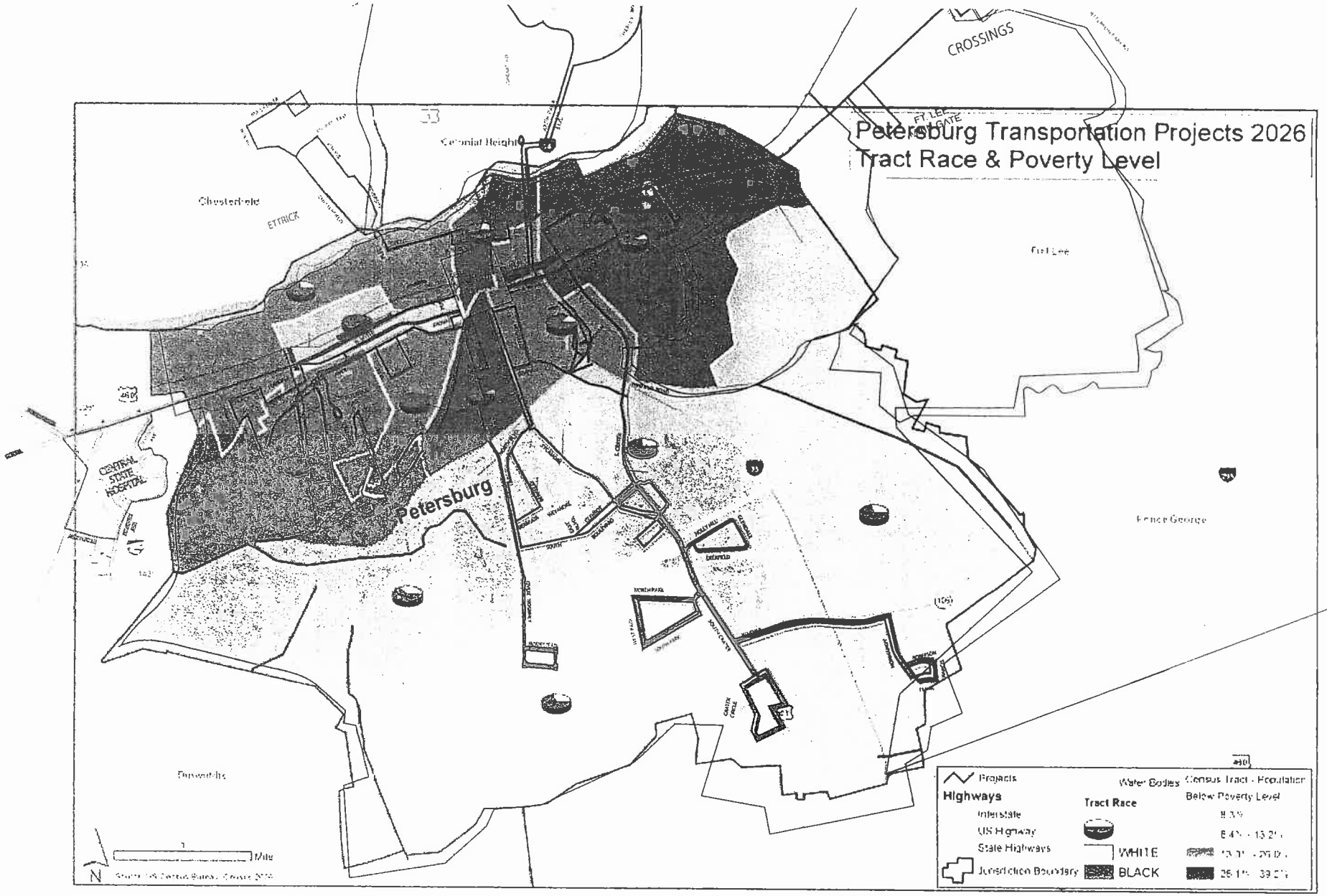
Petersburg Area Transit will continue to review the service area occupied by minorities. Petersburg Area Transit's Operations Manager will continue to practice and monitor each route focusing on vehicle load, passenger amenities and bus assignments. Any disparities found will be forwarded to the Director of Public Works for corrective action.

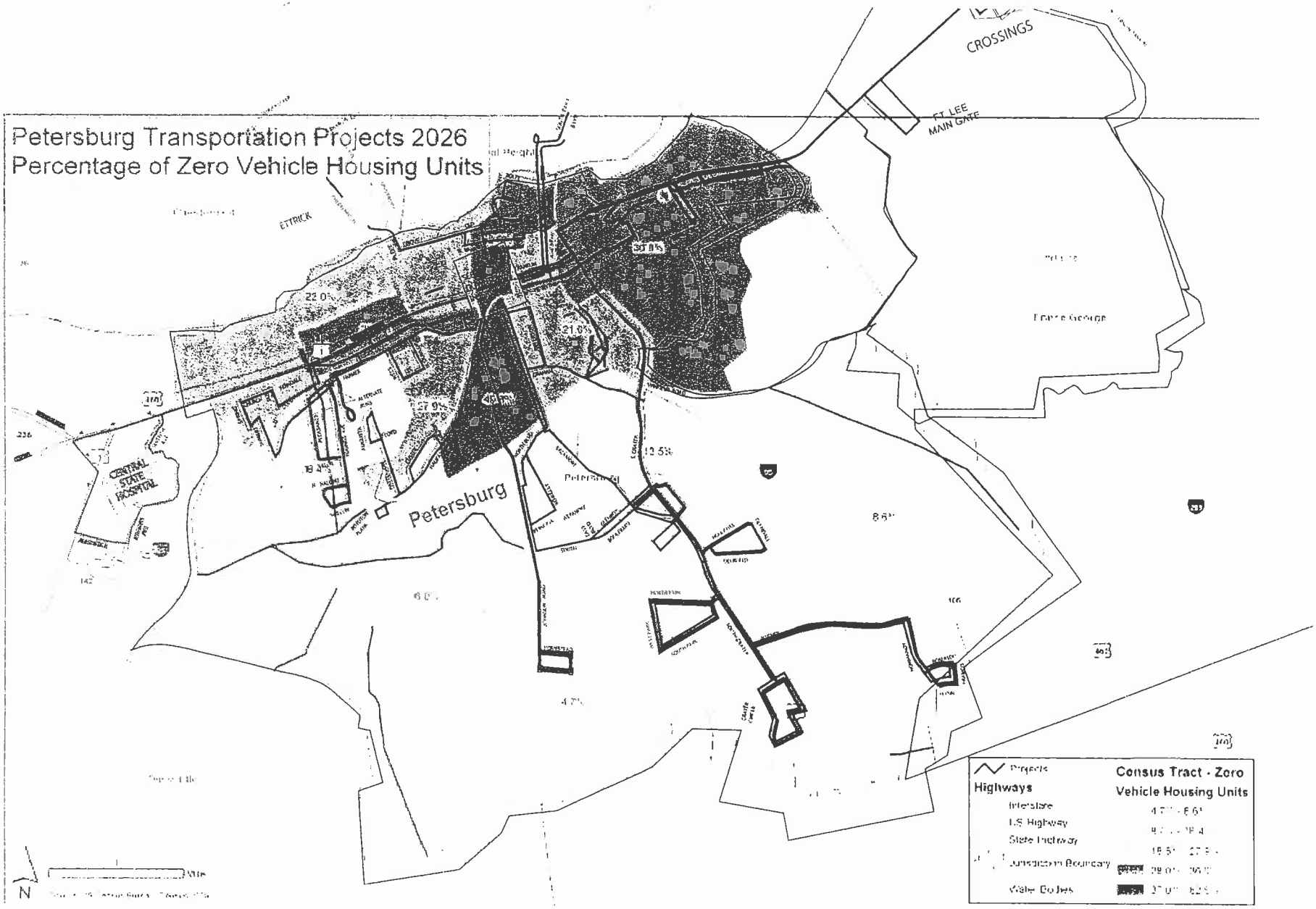
Appendix B: 2000 Census Tract Profile of the Transportation Study Area by Minority and Poverty Concentration

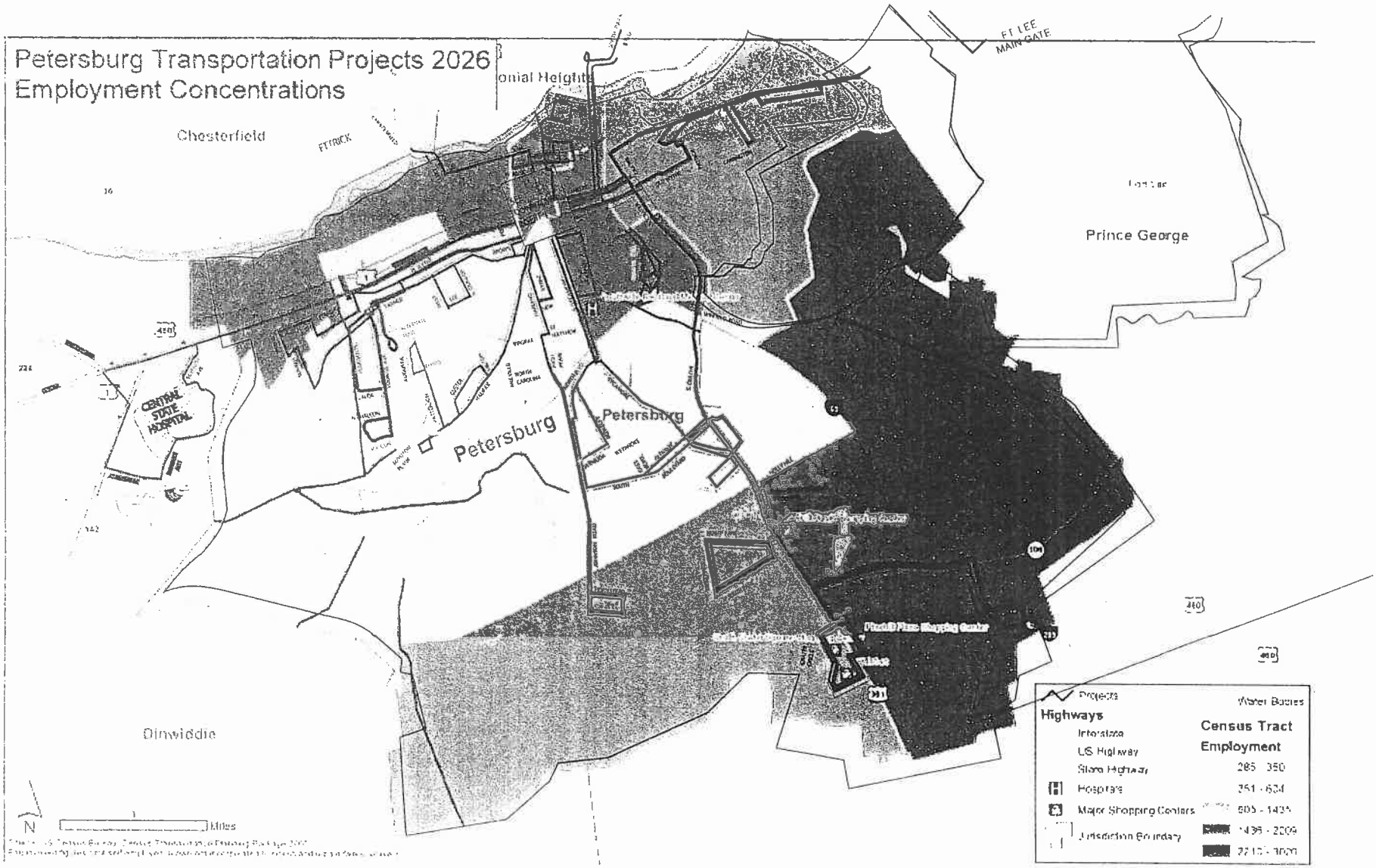


Colonial Heights & Hopewell Transportation Projects 2026
Employment Concentrations

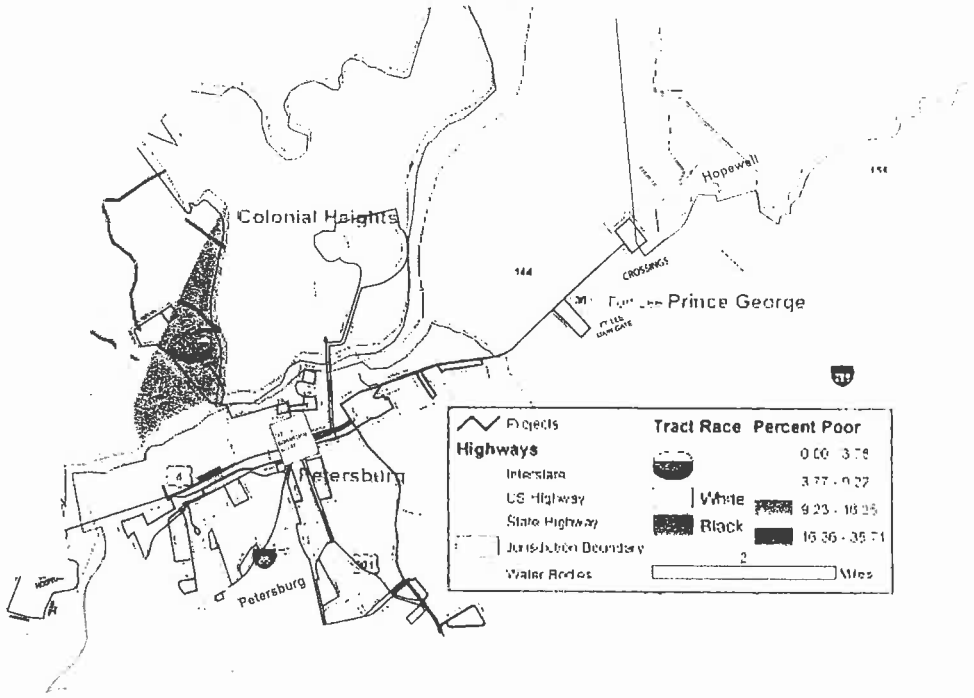



Petersburg Transportation Projects 2026
Tract Race & Poverty Level
CROSSINGS
Colonial Heights
Chesterfield
ETTRICK
Fort Lee
FT LEE GATE
CENTRAL STATE HOSPITAL
Petersburg
Prince George
Dinwiddie
Projects
Highways
Interstate
US Highway
State Highways
Jurisdiction Boundary
Water Bodies
Tract Race
WHITE
BLACK
Census Tract - Population Below Poverty Level
1 Mile
N

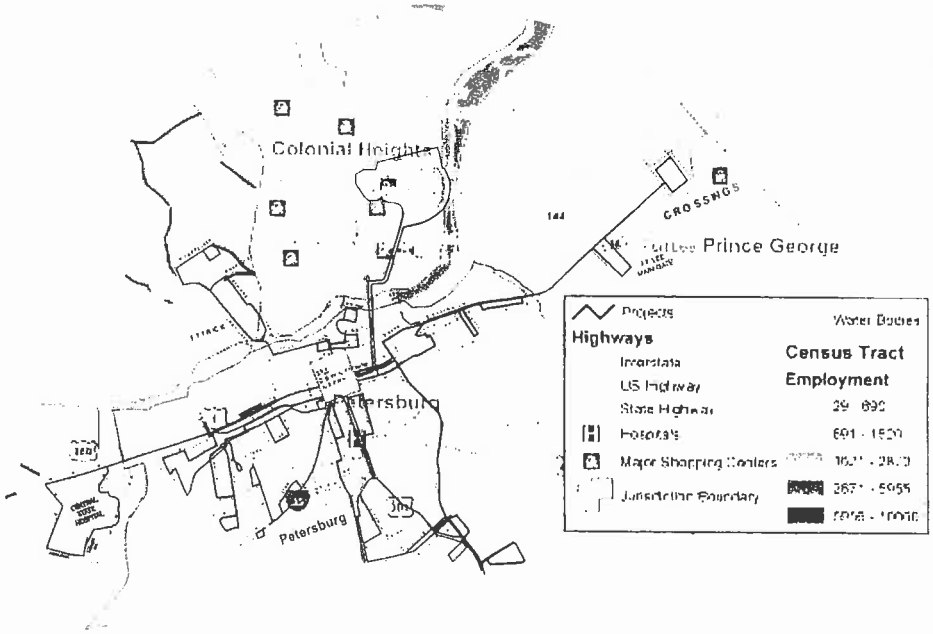

Petersburg Transportation Projects 2026
Percentage of Zero Vehicle Housing Units
CROSSINGS
FT LEE
MAIN GATE
ETTRICK
Petersburg
CENTRAL STATE HOSPITAL
Projects
Highways
Interstate
U.S Highway
State Highway
Jurisdiction Boundary
Water Bodies
Census Tract - Zero Vehicle Housing Units
N


Petersburg Transportation Projects 2026
Employment Concentrations
Chesterfield
Prince George
Petersburg
Petersburg
Dinwiddie
CENTRAL STATE HOSPITAL
FT LEE MAIN GATE
Projects
Highways
Interstate
US Highway
State Highway
Hospitals
Major Shopping Centers
Jurisdiction Boundary
Water Bodies
Census Tract Employment
285 - 350
351 - 634
635 - 1435
1436 - 2209
2210 - 3009
N
Miles

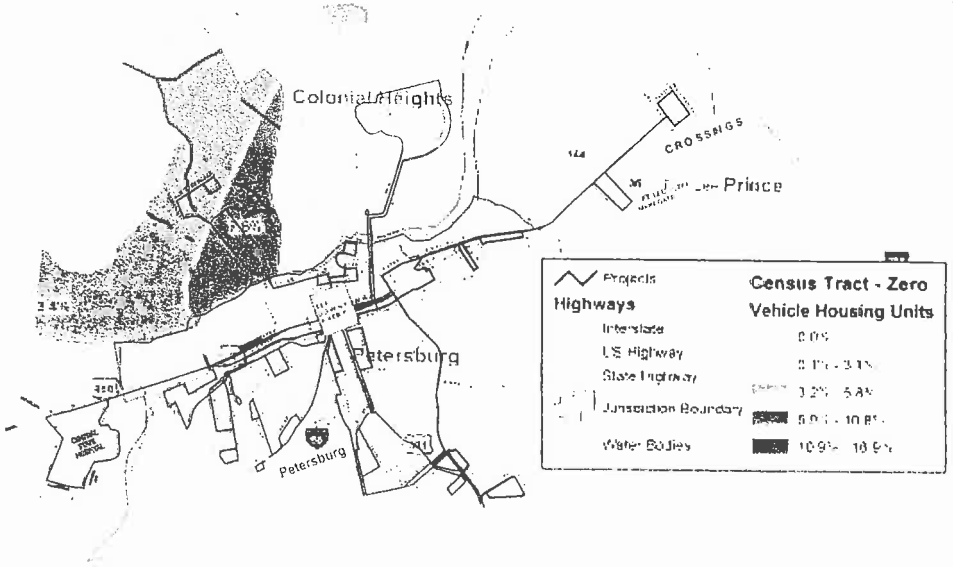
Chesterfield Transportation Projects 2026
Tract Race & Poverty Level

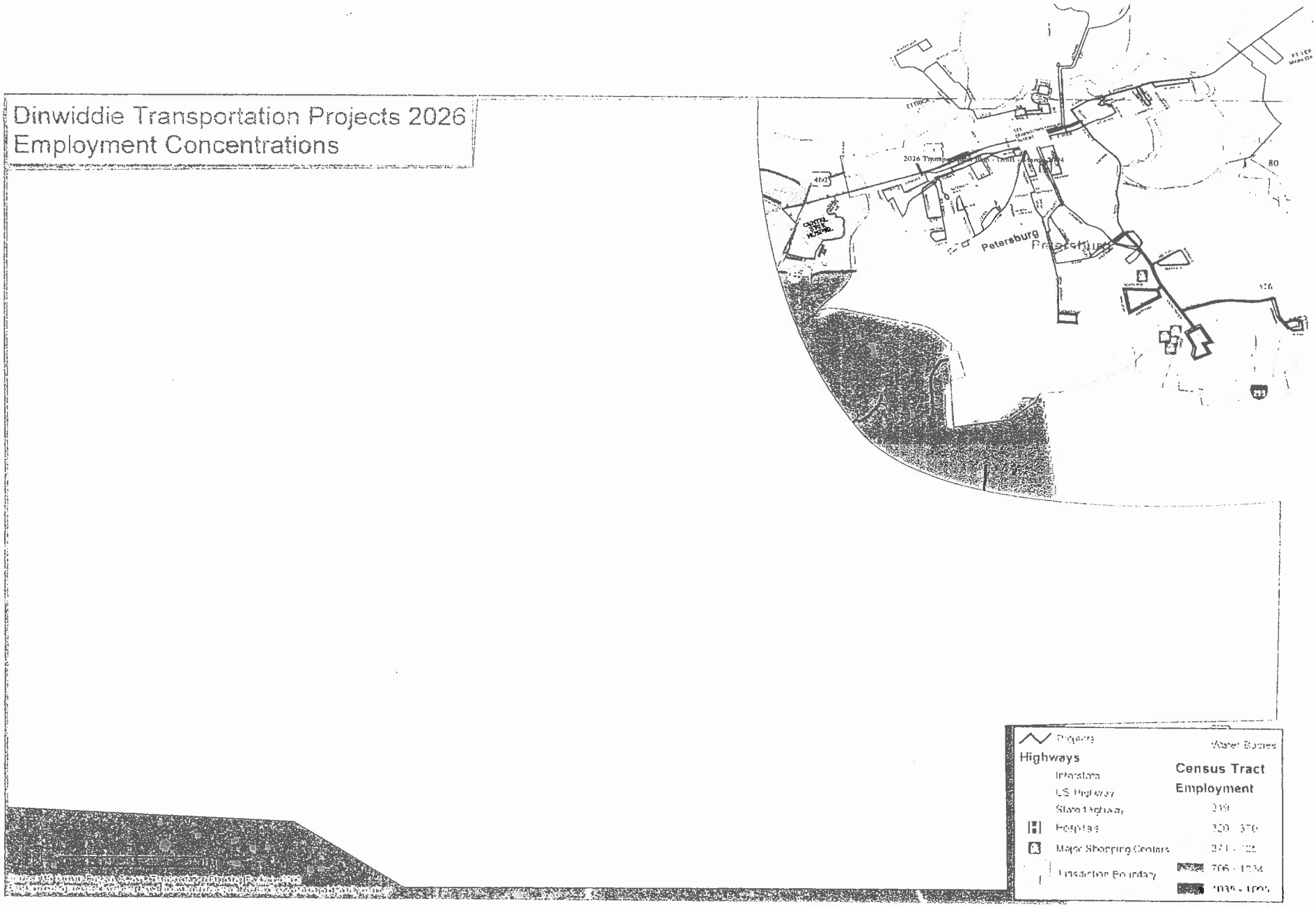


Chesterfield Transportation Projects 2026
Employment Concentrations

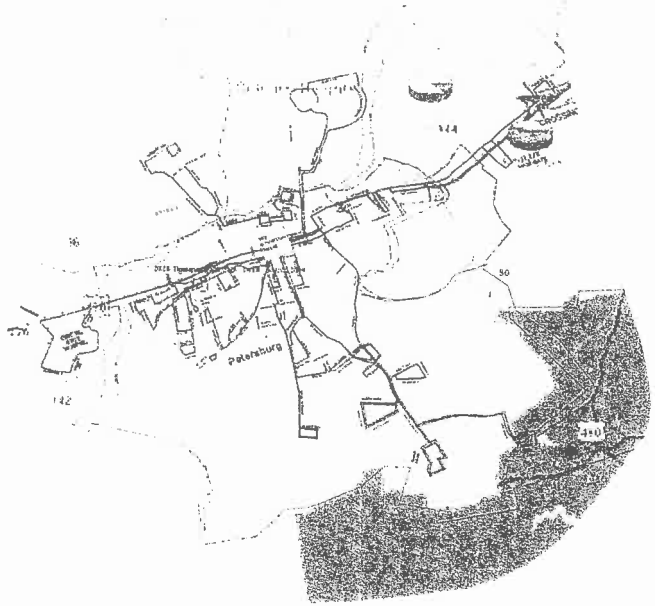


Chesterfield Transportation Projects 2026
Percentage of Zero Vehicle Housing Units



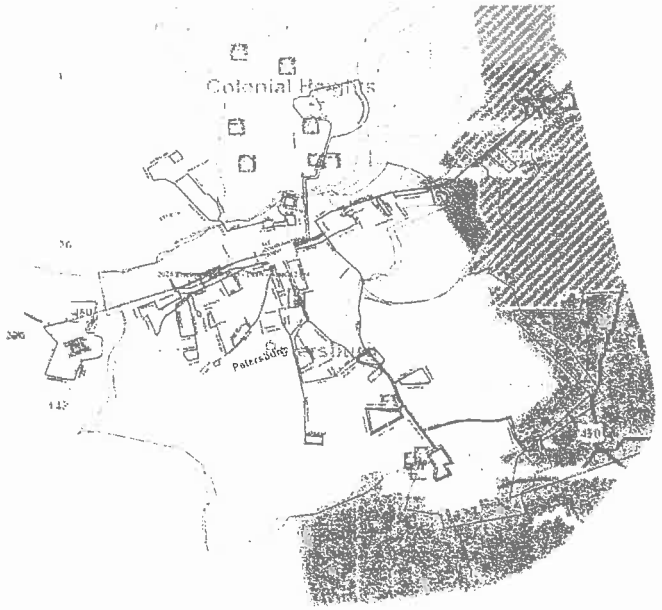

Dinwiddie Transportation Projects 2026
Employment Concentrations
Petersburg
Highways
Interstate
US Highway
State Highway
Hospitals
Major Shopping Centers
Census Tract
Employment

Prince GeorgeTransportation Projects 2026
Tract Race & Poverty Level



Projects
Highways
nterstate
IS Highway
State Highway
Jurisdiction Boundary
Water Bodies
Tract Race
White
Black
Census Tract - Population
Below Poverty Level

Prince George Transportation Projects 2026
Employment Concentrations



N

3 Miles

Census Tract Employment

Interstate
US Highway
State Highway
Railroads
Major Shopping Centers
Jurisdiction Boundary

APPENDIX C

FTA Triennial Review

RECEIVED
JUN 04 2007

FINAL REPORT

FY2007 TRIENNIAL REVIEW

of the

City of Petersburg
d.b.a.
Petersburg Area Transit
(PAT)
Petersburg, VA

Desk Review: January 30, 2007
Site Visit: May 1-2, 2007

June 2007

Prepared for the
Federal Transit Administration
Region 3
Philadelphia, PA

by

Milligan & Company, LLC

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7. Disadvantaged Business Enterprise (DBE) 5
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I. TRIENNIAL REVIEW BACKGROUND

The United States Code, chapter 53 of title 49, requires the Federal Transit Administration (FTA) of the United States Department of Transportation (USDOT) to perform reviews and evaluations of Urbanized Area Formula Grant activities at least every three years. This requirement is contained in 49 U.S.C. 5307(i).

> (2) At least once every 3 years, the Secretary shall review and evaluate completely the performance of a recipient in carrying out the recipient's program, specifically referring to compliance with statutory and administrative requirements and the extent to which actual program activities are consistent with the activities proposed under subsection (d) of this section and the planning process required under sections 5303-5306 of this title.
>
> (3) The Secretary may take appropriate action consistent with the review, audit and evaluation under this subsection, including making an appropriate adjustment in the amount of a grant or withdrawing the grant.

The Triennial Review includes a review of the grantee's compliance in 23 areas. The basic requirements for each of these areas are summarized below.

This report presents the findings from the Triennial Review of the City of Petersburg d.b.a. Petersburg Area Transit (PAT), Petersburg, VA. This review was performed in accordance with FTA procedures (published in FTA Order 9010.1B, April 5, 1993) and included preliminary reviews of documents on file at the Region 3 Office in Philadelphia and on-site discussions and review of the procedures, practices, and records of PAT as deemed necessary. The review concentrated primarily on procedures and practices employed during the past three years; however, coverage was extended to earlier periods as needed to assess the policies in place and the management of grants. During the visit, administrative and statutory requirements were discussed, documents were reviewed, and facilities were toured. Specific documents examined during the Triennial Review are available in FTA's and the PAT's files.

II. REVIEW PROCESS

The desk review was conducted in the Region 3 Office on January 30, 2007. Following the desk review, an agenda package was sent to PAT advising it of the site visit and indicating additional information that would be needed and issues that would be discussed.

The site visit to PAT occurred on May 1-2, 2007. The individuals participating in the review are listed in Section VII of this report.

At the entrance conference, the purpose of the Triennial Review and the review process were discussed. During the site visit, urbanized area formula grant program administrative and

statutory requirements were discussed and documents were reviewed. PAT's transit facilities were toured to provide an overview of activities related to FTA-funded projects. A sample of FTA-funded vehicles was inspected during the site visit.

Upon completion of the review, an exit conference was held with PAT's staff to discuss findings, corrective actions and schedules. This information is summarized in the table in Section V of this report. A draft copy of this report was provided to the City at the exit conference.

III. DESCRIPTION OF THE GRANTEE

Petersburg Area Transit (PAT) is a division of the City of Petersburg's Public Works Department. PAT provides transit service in the City of Petersburg and an adjacent area of Chesterfield County. PAT also partners with the Greater Richmond Transit Company to provide express service between Petersburg and the City of Richmond.

The population of PAT's service area is 31,000. Prior to 2003, the City and its service area were part of the Tri-Cities Urbanized Area, and the City of Petersburg was the designated recipient for Section 5307 assistance. Subsequently, the Tri-Cities UZA was absorbed into the Richmond TMA. By resolution of the MPO and with the concurrence of the Commonwealth of Virginia, both the City of Petersburg and the Greater Richmond Transit Company will be designated recipients for the redefined TMA.

PAT operates fixed route and complementary paratransit service with its own employees and vehicles. There are ten fixed routes. Service is provided Monday through Saturday from 6:30 a.m. to 5:30 p.m. There is no service on Sundays or on six major holidays. PAT operates Job Access Reverse Commute routes to the towns of Hopewell and Chester, VA.

The basic adult fare for bus service is $1.00. A reduced fare of 50 cents is offered to elderly and disabled persons during all hours. The fare for ADA paratransit service is $1.00 per one-way trip.

PAT operates a fleet of 13 buses for fixed-route service. There are twelve 35-foot buses and one 29-foot bus. The current peak requirement is for 10 vehicles. PAT also owns two vans that are used for complementary paratransit service.

PAT operates from a single maintenance and administration facility in Petersburg. Service is oriented around a downtown transit center.

PAT's National Transit Database Report for FY2006 provided the following financial and operating statistics for its fixed-route and paratransit service:

	Fixed-Route Service	Paratransit Service
Unlinked Passengers	491,404	8,968
Revenue Hours	34,940	4,716
Operating Expenses	$2,103,542	$145,979

During the review period, PAT began replacing shelters at fixed route stops throughout its system in addition to updating the security system of its administrative and maintenance facility. PAT is currently working on finalizing plans to secure a site for its Intermodal facility, which will serve as a hub for its routes, in addition to replacing its fleet. Over the next three to five years PAT expects to continue replacing bus shelters throughout its system and continue updating its fleet.

IV. RESULTS OF THE REVIEW

The Triennial Review focused on PAT compliance in 23 areas. This section provides a discussion of the basic requirements and findings in each area. No deficiencies were found with the FTA requirements in 15 of the 23 areas. Deficiencies were found in the other eight areas: Legal, Technical, Satisfactory Continuing Control, Disadvantaged Business Enterprise, Half Fare, ADA, Safety and Security, and Drug and Alcohol Program. In addition, advisory comments were made in the Safety and Security area.

1. Legal

Basic Requirement: The grantee must be eligible and authorized under state and local law to request, receive, and dispense FTA funds and to execute and administer FTA funded projects. The authority to take all necessary action and responsibility on behalf of the grantee must be properly delegated and executed.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for legal.

PAT has not submitted its 2007 Annual Certifications and Assurance via the Transportation Electronic Award Management (TEAM) system as required. PAT is required to pin its annual certifications and assurance via TEAM either 90 days after the federal register containing such listing is published or with the submission of its first grant application. The federal register containing the annual certifications and assurances was published on November 7, 2006; however, at the time of the site visit, PAT had not yet self certified in TEAM that they are compliance with the 5307 program.

Subsequent to the site visit, PAT submitted documentation via the FTA Transportation Electronic Award Management (TEAM) system that the city manager and attorney executed the FY07 Certifications and Assurances. This finding is now closed.

2. Financial

Basic Requirement: The grantee must demonstrate the ability to match and manage FTA grant funds, to cover cost overruns, to cover operating deficits through long-term stable and reliable sources of revenue, to maintain and operate federally funded facilities and equipment, and to conduct an annual independent organization-wide audit in accordance with the provisions of OMB C A-133.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for financial.

3. Technical

Basic Requirement: The grantee must be able to implement the Urbanized Area Formula Grant Program of Projects in accordance with the grant application, Master Agreement, and all applicable laws and regulations, using sound management practices.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for technical. PAT is housed on the Public Works department in the City of Petersburg. The Assistant Director of this department is responsible for implementing the FTA program. The Assistant Director has delegated the day-to-day operation of the FTA program to an Administrative Manager. The Administrative Manager has developed an outline of a process for managing the FTA grant program that includes the coordination between various city departments for the preparation and timely submission of required reports and program compliance. Due to the recent unscheduled and extended absence of the Administrative Manager, PAT did not implement these procedures to ensure that items such as the Financial Status Reports, Milestone Progress Report, National Transit Database, Drug and Alcohol MIS, and Safety and Security data are completed and filed timely. Further, the procedures do not address the development and submission of program updates such as Title VI, Disadvantaged Business Enterprise, or monitoring vendors for the implementation of the Drug and Alcohol Program requirements.

Corrective Action and Schedule: By August 30, 2007, PAT must submit to the FTA Region III Office procedures for monitoring the various FTA program requirements to ensure that program policies and updates are implemented and that required submissions are made on time.

4. Satisfactory Continuing Control

Basic Requirement: The grantee must maintain control over real property, facilities and equipment and ensure that they are used in transit service.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for satisfactory continuing control.

PAT maintains a schedule of all its federally funded equipment and facilities that delineates the 10 attributes required by the FTA. However, none of the rolling stock is included on this list, nor was there documentation provided that demonstrates that six of the 10 attributes (acquisition cost, federal percentage, grant number, location, use and condition and vested title) have been recorded for these assets.

Corrective Action and Schedule: By August 30, 2007, PAT must submit to the FTA Region III Office documentation to evidence that it has updated its records to include all of the required attributes for its federally funded assets.

5. Maintenance

Basic Requirement: The grantee must keep federally funded equipment and facilities in good operating order.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for maintenance.

6. Procurement

Basic Requirement: FTA grantees will use their own procurement procedures that reflect applicable state and local laws and regulations, provided that the process ensures competitive procurement and that the procedures conform to applicable federal law including 49 CFR Part 18, specifically Section 18.36 and FTA C 4220.1E, "Third Party Contracting Requirements." Grantees will maintain a contract administration system that ensures that contractors perform in accordance with terms, conditions, and specifications of their contracts or purchase orders.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for procurement.

7. Disadvantaged Business Enterprise (DBE)

Basic Requirement: The grantee must comply with the policy of USDOT that DBEs, as defined in 49 CFR Part 26, are ensured nondiscrimination in the award and administration of USDOT-assisted contracts. Grantees also must create a level playing field on which DBEs can

compete fairly for USDOT-assisted contracts; ensure that only firms that fully meet eligibility standards are permitted to participate as DBEs; help remove barriers to the participation of DBEs; and assist the development of firms that can compete successfully in the marketplace outside the DBE program.

Findings: During this Triennial Review of PAT, a deficiency was found with USDOT requirements for DBE.

Grantees are required to submit a Uniform Report on DBE Awards or Commitments and Payments on a semi-annual basis. These reports are due on June 1 and December 1. PAT advised that the semi-annual reports have not been submitted in approximately two years due to the absence of DBE Liaison Officer.

Corrective Action and Schedule: PAT must forward evidence of timely submission of the next semi-annual report (covering the period October 1, 2006 to March 31, 2007) to the FTA Region III Civil Rights Officer by June 15, 2007.

8. Buy America

Basic Requirement: Per Buy America law, federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless FTA has granted a waiver, or the product is subject to a general waiver. Rolling stock must have a 60 percent domestic content and final assembly must take place in the United States.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for Buy America.

9. Suspension/Debarment

Basic Requirement: To prevent fraud, waste, and abuse in federal transactions, persons or entities, which by defined events or behavior, potentially threaten the integrity of federally administered programs are excluded from participating in FTA-assisted programs. FTA grantees are required to ensure to the best of their knowledge and belief that none of the grantee's "principals" (as defined in the governing regulation 49 CFR Part 29), subrecipients, and third-party contractors and subcontractors is debarred, suspended, ineligible or voluntarily excluded from participation in federally assisted transactions. Grantees are required to review the Excluded Parties Listing System (http://epls.arnet.gov/) before entering into any third party contracts.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for suspension/debarment.

10. Lobbying

Basic Requirement: Recipients of federal grants and contracts exceeding $100,000 must certify compliance with Restrictions on Lobbying before they can receive funds. In addition, grantees are required to impose the lobbying restriction provisions on their contractors.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for lobbying.

11. Planning/Program of Projects

Basic Requirement: The grantee must participate in the transportation planning process in accordance with FTA requirements, Metropolitan Statewide Planning Final Rule, and Management Systems Interim Final Rule (Transportation Planning Regulations [TPR]), as revised.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for planning/POP.

12. Title VI

Basic Requirement: The grantee must ensure that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participating in, or denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance. The grantee must ensure that federally supported transit service and related benefits are distributed in an equitable manner.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for Title VI.

13. Public Comment Process for Fare and Service Changes

Basic Requirement: The grantee must have a locally developed process to solicit and consider public comment before raising a fare or carrying out a major reduction of transportation.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for public comment process for fare and service changes.

14. Half Fare

Basic Requirement: Grantees must ensure that elderly persons and persons with disabilities, or an individual presenting a Medicare card, will be charged during non-peak hours

for transportation using or involving a facility or equipment of a project financed under Section 5307 not more than 50 percent of the peak hour fare.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for half fare.

In reviewing PAT's public information about its fare structure, the documentation did not indicate that the half fare program is extended to Medicare cardholders.

Corrective Action and Schedule: By August 30, 2007, PAT must submit to the FTA Region III Office documentation that it has revised its fare information to extend the half fare program to Medicare Card holders.

15. ADA

Basic Requirement: Titles II and III of the Americans with Disabilities Act of 1990 provide that no entity shall discriminate against an individual with a disability in connection with the provision of transportation service. The law sets forth specific requirements for vehicle and facility accessibility and the provision of complementary paratransit service.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for ADA.

According to its website, PAT operates complementary paratransit service between the hours of 6:15 am and 6:15 pm Monday through Friday and 7:45 am to 6:15 pm on Saturdays. Fixed route service is offered during the hours of 6:30 am and 5:30 pm Monday through Saturday. However, PAT's brochure for complementary paratransit advertises service Monday through Thursday between the hours of 6:00 and to 6:30 pm, 6:00 am to 7:30 pm on Friday and 7:00 am to 7:30 pm on Saturday. The brochure for its fixed route service advertises service Monday through Thursday between the hours of 5:45 am to 7:00 pm and "expanded hours" on Friday and Saturday.

Corrective Action and Schedule: By August 30, 2007, PAT must submit to the FTA Region III Civil Rights Officer documentation that its complementary paratransit service is offered during the same hours and days as its fixed route service.

16. Charter Bus

Basic Requirement: Grantees are prohibited from using federally funded equipment and facilities to provide charter service except on an incidental basis and when one or more of applicable exceptions for urban areas set forth in the charter service regulation at 49 CFR 604.9 (b) applies.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for charter bus.

17. School Bus

Basic Requirement: Grantees are prohibited from providing exclusive school bus service unless the grantee qualifies under specified exceptions. In no case can federally funded equipment or facilities be used.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for school bus.

18. National Transit Database (NTD)

Basic Requirement: The grantee must collect, record, and report financial and non-financial data in accordance with the Uniform System of Accounts (USOA) and updated with the *National Transit Database (NTD) Reporting Manual* as required by 49 USC 5335(a).

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for National Transit Database.

19. Safety and Security

Basic Requirement: Any recipient of Urbanized Area Formula Grant Program funds must annually certify that it is spending one percent of such funds for transit security projects or that such expenditures for security systems are not necessary.

Under the safety authority provisions in the federal transit laws, the Secretary has the authority to investigate the operations of the grantee for any conditions that appear to create a serious hazard of death or injury especially to patrons of the transit service. However, FTA has no specific requirements for transit safety. States are required to oversee the safety of rail fixed guideway systems through a designated oversight agency. Under security, FTA has adopted the "Top 20 Security Program Action Items for Transit Agencies." The action items are measures recommended by FTA for immediate consideration and implementation by transit agencies to improve both security and emergency preparedness.

Findings: During this Triennial Review of PAT, a deficiency was found with the FTA requirements for safety and security. PAT was unable to demonstrate that it utilized one percent of its Urbanized Area Formula Grant funds for transit security, nor had it documented that these expenditures were unnecessary.

Subsequent to the site visit, PAT submitted the Transit Security Expenditures as noted in Exhibit 19.1. However, for FY 2004 and FY 2005 the 1% transit security expenditure was not met.

Corrective Action and Schedule: By July 2, 2007, PAT must submit to the FTA Region III Office a plan for meeting the requirement to utilize one percent of its Urbanized Area Formula Grant funds for transit security and report on the implementation of this plan.

During this Triennial Review of PAT, the following advisory comments were made. PAT is encouraged to prepare and implement the following:

- Conduct drills/assessments of potential emergency;
- Provide security information to passenger; and
- Develop protocols for threat advisory levels.

20. Drug-Free Workplace

Basic Requirement: Grantees are required to maintain a drug-free workplace for all employees and to have an ongoing drug-free awareness program.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for drug-free workplace.

21. Drug and Alcohol Program

Basic Requirement: Grantees receiving FTA funds under Capital Grant, Urbanized Area Formula Grant, or Non-Urbanized Area Formula Grant Programs must have a drug and alcohol testing program in place for all safety-sensitive employees.

Findings: During this Triennial Review of PAT, deficiencies were found with the FTA requirements for the drug and alcohol program.

PAT's Drug and Alcohol policy provided during the review does not include all of the required elements. The policy does not include behavior that constitutes a refusal to submit to a test, or the requirement that covered employees submit to secondary testing upon receipt of a negative-dilute result from the MRO. There was no documentation provided that the policy was approved by the final authority of the agency. In addition, PAT was unable to demonstrate that it has developed and implemented procedures to monitor its program vendors (e.g., collection sites, MROs) to ensure the integrity of the drug and alcohol testing program and the quality of testing services provided.

Corrective Actions and Schedules: PAT must submit the following to the FTA Region III Office by July 2, 2007:

- documentation that it has revised its Drug & Alcohol policy to include all required elements, obtained governing board approval, and re-communicated the policy to all affected employees; and
- documentation that it has begun monitoring its drug and alcohol program vendors, such as the collection site and the MRO, to ensure that they comply with federal requirements.

22. Equal Employment Opportunity (EEO)

Basic Requirement: The grantee must ensure that no person in the United States shall, on the ground of race, color, creed, national origin, sex, age, or disability be excluded from participating in, denied the benefits of, or be subject to discrimination in employment under any project, program or activity receiving federal financial assistance from the federal transit laws.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for EEO.

23. ITS Architecture

Basic Requirement: Intelligent Transportation Systems (ITS) projects funded by the Highway Trust Fund and the Mass Transit Account must conform to the National ITS Architecture, as well as to U. S. Department of Transportation (DOT) adopted ITS standards.

Findings: During this Triennial Review of PAT, no deficiencies were found with the FTA requirements for ITS architecture.

V. SUMMARY OF FINDINGS AND CORRECTIVE ACTIONS

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
1. Legal	D	06: No/late submission	Submit to the FTA Region III Office documentation that the city manager and attorney has executed the FY07 Certifications and Assurances and also completed the "pinning" process in TEAM.	July 2, 2007	May 17, 2007
2. Financial	ND				
3. Technical	D	01: Inadequate grant administration/procedures	Submit to the FTA Region III Office procedures for monitoring the various FTA program requirements to ensure that program policies and updates are implemented and submitted timely	August 30, 2007	
4. Satisfactory Continuing Control	D	03: Inadequate equipment records	Submit to the FTA Region III Office documentation to evidence PAT has updated its records to include all of the required attributes for its federally funded assets.	August 30, 2007	
5. Maintenance	ND				
6. Procurement	ND				
7. Disadvantaged Business Enterprise	D	07: Uniform reports not submitted semi-annually	Submit to the FTA Region III CRO the Uniform Report for DBE Awards or Commitments and Payments.	June 15, 2007	
8. Buy America	ND				
9. Suspension/ Debarment	ND				
10. Lobbying	ND				
11. Planning/POP	ND				
12. Title VI	ND				
13. Public Comment for Fare and Service Changes	ND				
14. Half Fare	D	02: Fares not extended to all required services	Submit to the FTA Region III Office documentation that PAT has revised its fare information to extend the half fare program to Medicare Card holders.	August 30, 2007	
15. ADA	D	04: ADA Complementary Paratransit service deficiencies	Submit to the FTA Region III Civil Rights Officer documentation that its complementary paratransit service is offered during the hours of its fixed route service.	August 30, 2007	
16. Charter Bus	ND				
17. School Bus	ND				
18. National Transit Database	ND				

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
19. Safety and Security	D	07: One percent security requirement not met	Submit to the FTA Region III Office a plan for meeting the requirement to utilize one percent of PAT's Urbanized Area Formula Grant funds for transit security and report on the implementation of this plan.	July 2, 2007	
	AC	21: Drills/ assessments of potential emergency events not performed	PAT is encouraged to implement the advisory comment detailed in the deficiency column.	NA	
	AC	27: Security information not provided to passengers		NA	
	AC	34: Protocols for threat advisory levels lacking		NA	
20. Drug-Free Workplace	ND				
21. Drug and Alcohol Program	D	02: Drug and alcohol policy lacking required elements	Submit to the FTA Region III Office documentation that it has revised its Drug & Alcohol policy to include all required element and that it has obtained governing board approval and re-communicated it to all affected employees.	July 2, 2007	
		09: Drug and/or alcohol program vendors not properly monitored	Submit to the FTA Region III Office documentation that it has begun monitoring its drug and alcohol program vendors, such as the collection site and the MRO, to ensure that they comply with federal requirements.	July 2, 2007	
22. Equal Employment Opportunity	ND				
23. ITS Architecture	ND				

Findings: ND = No Deficiencies; D = Deficient; AC = Advisory Comment; NA = Not Applicable; NR = Not Reviewed

VI. TRANSIT SECURITY EXPENDITURES

Does the grantee expend one percent or more of its Section 5307 Urbanized Area Formula Grant funds for transit security? Yes___ No_X__

If no, why does the grantee consider such expenditure unnecessary (check all that apply):
_____ No deficiency found from a threat and vulnerability assessment
_____ FTA Top 20 Security Action Items met or exceeded
_____ Other (please describe): _____

Security Funding	FTA Section 5307 Funds (in Dollars)		
	FY 2004	FY 2005	FY 2006
Total amount of 5307 Funds expended	$1,794,717.65	$1,900,692.93	$1,408,316.58
Amount of 5307 Funds expended on security	$15,629.18	$6,600.00	$32,833.00
Percent of 5307 Funds expended on security	.87%	.35%	2.34%
Infrastructure/Capital Improvement Security Projects:			
Lighting, Fencing & Perimeter Control	$15,629.18	$1,100.00	$3,000.00
CCTV and Surveillance Technology			
Communications Systems			$7,000.00
Security Planning*		$5,000.00	$22,833.00
Drills & Tabletop Exercises*			
Employee Security Training*			
Other Security-Related Infrastructure & Capital Improvements (please list): _____		$500.00	
Operating/Personnel Expenditures (can only be used by agencies in areas with populations UNDER 200,000):			
Contracted Security Force			
In-house Security Force			
Other Security-Related Operating Expenditures (please list): _____			

* SAFETEA-LU amended the definition of a capital project to include:
- projects to refine and develop security and emergency response plans;
- the conduct of emergency response drills with public transportation agencies and local first response agencies; and
- security training for public transportation employees.

VII. ATTENDEES

Name	Title/Organization	Phone Number	e-mail address
Grantee			
Ron Reekes	Transit Manager/PAT	804-733-2355	rreekes@earthlink.net
Joyce R. Mason-Goode	Administrative Manager/PAT	804-733-2413	jrm_goode@verizon.net
Marvin Rollins	Operations Manager/PAT	804-733-2413	marvinrollins@earthlink.net
Brian Tyson	Transit Superintendent/PAT	804-733-2413	brtyson@yahoo.com
Debra Lee	Assistant Finance Director/City of Petersburg	804-733-2337	dklee1@earthlink.net
Claristine Moore	Human Resource Director/City of Petersburg	804-733-2324	ejmoore001@earthlink.net
FTA			
Karen Roscher	Transportation Program Specialist	215-656-7100	karen.roscher@dot.gov
Reviewer			
Diane King	Lead Reviewer	215-496-9100	dking@milligancpa.com

APPENDIX D

Survey Comments

General Comments

I have used mass transit when I lived in other areas of the country. It's encouraged and facilitated in many other metro areas. I don't get that feeling here....It seems that merchants would want to see you funnel traffic to their stores at Southpark Mall or Old Towne. Get them involved.

Need a reliable direct service to Richmond

Additional Shuttle Vans, rather than just Taxis needed to transport Ft Lee soldiers to Southpark Mall and other shopping destinations in Prince George County. Limited PAT Bus service into Baileys Ridge and Jefferson Pointe Apartments (Prince George) needed to serve those without cars to get to work or shopping destinations. Expand the Tri-Cities Bikeway/Sidewalk Plan into Prince George County more and work with County Officials on village area sidewalks and bikeways along state maintained roads that are less than 35 MPH and not on narrow, rural county roads competing with cars, school buses, etc.

Other than the scheduling issues with the plaza and halifax routes the transit system has improved a little. The uniforms however are very very tacky, when i started utilizing the transit system i have to say the uniforms were very professional, and the operators were very neat when driving. the uniforms really need to be looked at. Route extensions need to be looked at like into inner hopewell and the boulavard. my only real major complaint is the halifax and plaza wich i have mentioned before. The Blandford and Fort Lee route is to long, i work on fort lee and it was very convient to hop onto the fort lee bus and get to fort lee in very good time, now i have to ride all through neighborhoods that i do not like and it take me longer to get into work. I trust that this survey will do some good but if changes are not made i will be forced to make other changes into my transportation needs. take in mind i spend on average of about 40.00 per week for all running around its alot cheaper than a cab.

The County is growing, and there should be some type of public transportation for people who are unable to drive, due to age, financial statue, etc. Hopefully after this poll, there will be something actually done, instead of doing more surveys. There should be at the very least transportation along the main streets of the county (156, 460, Courthouse, etc). Too much talk, and not enough walk is done in the county. Someone has to get off their butt and stand up, even if it means that they might lose the next election.

THE GOVERNMENT HAS NOT AND CAN NOT PROVIDE ANYTHING AND DO IT PROPERLY. GET OUT OF OUR BUSINESS, LOWER OUR TAXES AND WE WILL TAKE CARE OF OUR OWN. YOU SOLD THE DUMP AND ARE NOT GOING TO LOWER OUR TAXES BY THE AMOUNT "THE CITY IS GOING TO SAVE". NOW I DO NOT TAKE MY TRASH TO THE DUMP, I LEAVE IT FOR THE TRASH PEOPLE TO PICK UP. 90% OF ALL SERVICES RUN BY THE CITY COULD BE DONE CHEAPER AND FASTER BY THE PUBLIC SECTOR. THE CITY COUNCIL AND MAYOR NEED TO GET OUT OF CIVIL WAR TIME AND BRING THE INDUSTRY BACK TO PETERSBURG, TO INCREASE EMPLOYMENT AND SHIFT THE TAX BASE FROM RESIDENCIAL TO INDUSTRIAL.

Anything would be better than the limited options we have now.

Public Transportation may be a need for isolated areas. Overall, public transportation in the Tri-Cities seems to be a waste of resources. Buses are empty or have a handful of passengers, at best. The consideration of a rail system is redundant considering the access to I-95. I do not want to frequent any establishments that are included in the public transportation routes due to the lack of safety and blight that those routes introduce to, otherwise, safe & pleasant establishments. Surely, there are other programs and needs in the Tri-Cities that would produce a larger return than boistering an already wasteful Public-Transit system.

Really concerned as I age in a way to get to doctor, grocery, etc.

For the most part the transportation is good, but I would like to see it a little more in the royle areas.

Colonial Heights is already overburdened, overtaxed, and overwhelmed as the only decent shopping area in the Tri-Cities. Instead of adding to the problem by increasing public transportation into the city, Petersburg, Hopewell, and Prince George need to build their own shopping areas.

It would be good to have improved public transportation -- however in less urban areas, it is more likely that people (myself inlcuded) will use personal transport for the convenience (location and timing), space for shopping items, and general comfort of using one's own vehicle. I would not be thrilled with a bus route through the housing development in which I live and without a well placed bus stop, it is unlikely that many people would use the service because of walking distances, etc. If I lived in a metropolitan area, I would certainly use the bus and subway systems to get around. There is nothing like that in Prince George and one of the attractions for living in Prince George was the lack of urban mess and the subsequent infra-structure that tends to add to the "jungle" of urban areas.

Unnecessary expenditures for both private and public funding

How about for outlying areas and non-daily use, there can be a program to request/reserve service 24 to 48 hours in advance?

Look at cities such as Atlanta and San Fransisco. Good dependable local transporation service that is safe and convienent. This cities thrive based on a regional and affordable system. This is not aPetersburg issue but a regional issue from Ashland to Petersburg and the airport. Need a regional manner of transporting people and the areas will thrive. We really need lite rail.

Need transportation for elderly that can no longer drive.

I live in Prince George. MANY people, including myself, my wife, and my two children work or attend school/college in Richmond. MANY of these people drive individual cars everyday because there is no consistent, flexible public transportation bwtween the tri-cities and Richmond. This contributes to congestion on Rt. 10, Rt. 1, I-95, etc. My family would use public transportation if it were available, affordable, and flexible enough to accomodate family schedules.

More express routes are needed.

Keep the bums off of the bus.

I do not drive to Richmond (or in Richmond) any more but would like to shop occasionally or attend programs or visit museums in Richmond. Public transportation to the MCV area would also be a great assistance if/when medical attention was needed in Richmond. I live right outside Hopewell and could easily get to Hopewell, then ride to Richmond.

With the up coming growth in the tri-cities a very big need

terrific!

I would like to return to Prince George County within the next 12 months, but my concerns about public transportation are discouraging my selection of a home where I can "age in place," as driving may become more difficult. As an active participant in community and national senior organizations and an active advocate for enhanced special services transportation locally, I was distressed that the Crater Transportation had no immediate future plans to add services for Prince George residents, other than to continue transportation to medical appointments. I envision special or discounted taxi services to connect to buses. Safety issues are increasingly more acute, expecially while carrying purchases or after medical treatment.

Now is not the time to spend more money for public services when there are less tax dollars coming in !

In addition to fostering an atmosphere of usability within the public transportation system, there is a great need for improving and increasing the sidewalks in Chesterfield County. I live five minutes from the grocery store, but cannot walk there because there is no sidewalk connecting my neighborhood to the shopping center. So, what do I do? I jump in the car and wear out the road for a trip that I would rather walk. Every car on the road wears out the pavement a little more, increasing the county's cost of maintaining the roads. A few well-place sidewalks or walking lanes would grant pedestrians the freedom to walk, instead of drive, therefore decreasing the number of cars on the road, which in turn decreases congestion. Middle class residents are more likely to walk, where possible, than to take public transportation. More sidewalks, not better buses, is the answer to our transportation challenges in Chesterfield county.

It would be helpful to know all of the connecting transit sites and hours of operation on the web. I am curious about what buses will run at the new Petersburg Transit Building and hours of operation.

There is 1 bus that comes from petersburg to southpark mall-this is it. Inside Colonial Heights we have zero public transportation; except taxi cabs. Years ago when we did have bus service it was not promoted in any way and thus had few riders. We cannot connect to the rest of the Tri-Cities where many of a persons appointments are; especially medical. Public transportation is often viewed here as low-income/low class transportation that brings that element into our area. This is an unfortunate attitude.

Less traffic, more safer for the elderly,also to give people choices and independence!

I ride the 6:35 am Parham Express Bus 26. It frequently is tardy thus making everyone on the bus late for work.

If the City of Richmond built a transportation hub near Main Street Station it would provide a location accessible by train that would enable Petersburg, City of Richmond, Chesterfield Co., Fredericksburg and other buses to meet in a central place to make connections. Local buses could be turned around on their routes more frequently reducing the time period between buses without increasing the number of buses needed to service a route. Riders from locations outside of the Richmond area would find it easier to get around in the city and get to other cities and counties as well. Making bus travel more convenient and timely will draw riders. Buses that run once an hour or every 30 minutes turn people off. Every 30 minutes might be tolerated going from city to city but not within the city. During difficult financial times public transportation is more attractive but only when it is not a hindrance time wise. If you are going to waste my time your service is not worth the monetary savings.

See earlier comments. Richmond Trolley! If you want to hear a large scale plan and implementation outline complete with scaled deployment try emailing me, I love to talk about it. wipearce@yahoo.com

I'd like to see us develop a network of bike paths similar to James City County. Or perhaps, something similar to the Virginia Creeper Trail.

The single biggest reason I don't use GRTC is that it is just plain cheaper to drive. I would strongly suggest that GRTC and other public transportation options include a way to subscribe for 1 month, 3 month, and annual unlimited transportation. It would make it more affordable for frequent riders, increase ridership, and would likely increase revenues and profit. I believe a large number of individuals with every intention to ride mass transportation will purchase such a pass, and many will rarely use it. I also believe that many of these people will renew such a pass even if they aren't receiving the full benefit of the program.

Tax money should be spent on improving and expanding the local roads, as public transportation WILL NEVER be able to address the entire region and provide the necessary transportation needs of all the citizens. Mass or public transportation only works in major metropolitan areas, due to the density of the jobs, housing and shopping.

I am an avid user of public transportation. I utilize public transportation everywhere that I travel. I currently use GRTC an average of 4 times a day for the last 21 years. I travel to the Petersburg/Fort Lee area frequently and like using PAT, but have it was very limited service. Improved service to Colonial Heights and Ettrick other then just to Southpark Mall and the university area would be a vast improvement. Service to downtown Hopewell,especially to John Randolph hospital,should be a priority.

As long as there are retail stores open, a bus should go to Southpark Mall and to Walmart in Petersburg. I would go to Ukrops in Colonial Heights if there was a bus going there but Colonial Heights does not want our business in Petersburg!!

where you need.

More public transportation within Chesterfield County...right now there are only two GRTC service lines running into downtown Richmond City

To all hospitals in Petersburg and Richmond,Va.

Please correct item 5.A. I read the question twice to ensure my eyes were not deceiving me. I cannot believe such an error was allowed to be published on a public survey, nor could I continue to answer the remaining questions. There are many capable people who have lost jobs who would never have allowed such an error reach the masses of a public survey. *(Note- there was a typo that read "indicated" rather than "indicate")*

I live in Blandford. Taking away the half-hour run on the Blandford bus has been inconvenient.

I really think that an improved public transportation system throughout the Tri-Cities would be beneficial in the following ways: 1) work force development and opportunities; 2) Enhanced opportunities to access local trade and higher educational resources; 3) Enhanced use of cultural attractions and events; 4) Improved regional cooperation; 5) Improve environment. I would be willing to pay higher taxes to my local government to help pay for public transportation accessibility!

Need transportation in other areas of Colonial Heights, Prince George, Dinwiddie, Chester, Etc.

There are no buses in Colonial Heights. This really needs to be changed.

I feel it would be helpful to have public transportation. I have 2 family members with no drivers permit and this would help them with employment.

There is a need for local bus service in Colonial Heights, especially Boulevard area, some residential areas, and Conduit Road. Colonial Heights does have a bus operated by the Senior Center. An hourly bus to shopping center (South Park) and along Boulevard for grocery stores, pharmacies is much needed.

Buses needed to run from Colonial Heights to Chester. Chesterfield and around Chesterfield (inside the County) without a car, it is almost impossible to get around the County.

When I was a teenager a bus ran 7 days a week from early am to late pm up and down the Boulevard. Minivans would do well on side streets.

Local service to downtown Hopewell, Fort Lee, Petersburg. Direct service to South Park Mall. Regional service to downtown Richmond. Greyhound bus depot needed in Hopewell.
Anything would be an improvement

GET THE DRIVERS TO SLOW DOWN IN NEIGHBORHOODS.... I FEAR FOR ANY KID EVERYTIME I HEAR ONE OF THOSE BUSES FLYING RECKLESSLY UP THE STREET.